

NEC ELECTRONICS

# CSR and Environment Report 2009

NEC ELECTRONICS

09

# The Role of CSR and Environment Report 2009

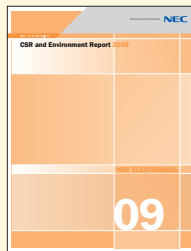
In addition to increasing its profits, the NEC Electronics Group aims to contribute to the sustainable growth of society by undertaking business activities such as improving customer satisfaction, attaining a high degree of corporate transparency, protecting the environment, contributing to communities, and respecting human rights.

Every year, the NEC Electronics Group issues the *CSR and Environment Report* and *Annual Report* to provide an overall picture of its business, including the social, environmental, and economic aspects.

*CSR and Environment Report 2009* was prepared for all the stakeholders—including customers, shareholders and investors, trading partners, employees, and residents of local communities where our businesses are located—to describe our business activities from the standpoint of corporate social responsibility in accordance with the NEC Electronics Guiding Principles used by the entire NEC Electronics Group, along with our environmental activities.

## Social and environmental report **CSR and Environment Report**

- Social role of the NEC Electronics Group
- Separate activity reports for each stakeholder
- Approach to environmental management
- Green-product activities
- Eco-factory activities
- Eco-communication activities



## Economic report **Annual Report**

- Management policies
- Business results
- Financial position



### Inclusion in SRI (Socially Responsible Investment) indexes (current as of June 2009)

We are among 150 companies selected for inclusion in the Morningstar Japan K.K. SRI stock price index, Morningstar Socially Responsible Investment Index (MS-SRI). (September 2004)



### Participant in the United Nations Global Compact

Since March 2008, we have participated in the United Nations Global Compact.



## NEC Electronics Guiding Principles

At NEC Electronics, we are dedicated to cultivating trust with every individual and organization, including customers, shareholders, investors, trading partners, and employees.

We pledge to conduct our business with integrity, beyond legal compliance, by acting responsibly as concerned corporate citizens, while providing superior semiconductor solutions based on advanced technologies.

NEC Electronics is committed to the following Guiding Principles.

### ● Customer Focus

To provide optimized solutions and comprehensive support that exceed the highest expectations of our customers and earn their unwavering loyalty.

### ● Ethical Business Practices

To promote free and fair market competition through transparent and ethical business practices, which are conveyed to the public through our actions and communications.

### ● Community Involvement

To implement activities that contribute to both local and international communities, while respecting the history, culture, and human rights of each region.

### ● Environmental Protection

To promote sustainable development by minimizing the environmental impact of our products throughout their entire life cycles.

### ● Corporate Culture

To foster a corporate culture that respects individuality and encourages innovation, where all employees are proud to be part of the NEC Electronics team.

## CONTENTS

<b>Top Commitment: Message from the President .....</b>	<b>3</b>
<b>Feature: Toward a Green Society.....</b>	<b>4</b>
<b>Management.....</b>	<b>8</b>
<b>NEC Electronics Group CSR Management System .....</b>	<b>9</b>
<b>Social Responsibility .....</b>	<b>14</b>
<b>Policies and Activities for Improving Customer Satisfaction .....</b>	<b>15</b>
<b>Quality Improvement Strategies.....</b>	<b>17</b>
<b>Quality Improvement and Product Safety .....</b>	<b>18</b>
<b>Approach to Transparent Management .....</b>	<b>20</b>
<b>Working Together with Purchasing Partners.....</b>	<b>21</b>
<b>Working Together with Sales Partners .....</b>	<b>23</b>
<b>Community Involvement.....</b>	<b>24</b>
<b>Respect for Human Rights and Equal Opportunity Practices.....</b>	<b>26</b>
<b>Human Resource Development and Communication .....</b>	<b>28</b>
<b>Occupational Health and Safety .....</b>	<b>29</b>
<b>Efforts to preserve the global environment.....</b>	<b>30</b>
<b>Environmental Management System .....</b>	<b>31</b>
<b>Green-product activities.....</b>	<b>37</b>
<b>Eco-factory activities.....</b>	<b>39</b>
<b>Eco-communication activities .....</b>	<b>45</b>
<b>Milestones in Environmental Activities .....</b>	<b>47</b>
<b>Corporate Profile.....</b>	<b>48</b>

## Editing Policies

- NEC Electronics publishes two reports—*CSR and Environment Report* and the *Annual Report*—that address the environmental, social, and economic activities of the NEC Electronics Group.
- This *CSR and Environment Report* is intended for the many stakeholders in the NEC Electronics Group—employees, customers, residents in local communities where our business are located, trading partners, and shareholders and investors—with the objective of presenting our approach to CSR and specific activities we undertake in an easily comprehensible format that promotes two-way communication with stakeholders.

## Guidelines used for Reference

- The Ministry of the Environment's *Environmental Reporting Guidelines 2007*
- The Ministry of the Environment's *Environmental Accounting Guidelines 2005*
- GRI's (Global Reporting Initiative) *Sustainability Reporting Guidelines 2006 (third edition)*

## Scope of Content

This report describes the 6 companies in Japan, including NEC Electronics Corporation, and the 11 companies overseas that comprise the NEC Electronics Group.

## Reporting Period

Fiscal 2009 (the fiscal year from April 1, 2008 to March 31, 2009). (Some of the activities reported were conducted after the reporting period.)

## Publication Date

September 2009.

## Detailed Information

In addition to the information in this report, details on CSR promotion at NEC Electronics are available on our public website at the following URL.

URL <http://www.necel.com/csr/en/>

## Top Commitment

### **We aim to build a society that is safe, secure, and friendly to the environment**

Since its establishment in 2002, the NEC Electronics Group has been expanding its operations on a global scale, based on our mission to contribute to society through our semiconductor products. In the latter half of fiscal 2009, however, the global economy suffered an unprecedented large-scale recession. This recession has seriously affected our customers' sales figures and has caused customers to reduce, and in some cases halt, production. This has in turn led to a dramatic drop in demand for semiconductors, leading us to operate in an extremely difficult business environment.

To turn things around, we need to enhance the quality of our business. But at the same time, in our effort to expand business, we must not forget our corporate social responsibility. It is vital that we reconfirm what we need to do to help build a sustainable society. Semiconductors can play a central role in this. By providing semiconductor solutions based on advanced technologies, we can help preserve the global environment—a pressing issue that is facing us right now—and realize a society that is safe and secure.

Even before we became independent in 2002, we realized that preserving the environment was directly linked with achieving sustainable business development. We have constantly looked for ways to reduce the environmental impact of our manufacturing operations, while providing products that are energy efficient and highly reliable. Our semiconductor products are used in a wide variety of applications throughout the world. By providing environmentally sound products, we can help create a society that is friendly to the environment.

The United States and other countries around the world have recently been talking about a Green New Deal and how it will create new markets and give rise to new business opportunities. Central to the Green New Deal concept is the creation of smart grids, next generation electricity networks that use information technology to optimize energy use. Semiconductors with communication features will prove to be a vital tool in creating these grids. NEC Electronics can play its part in building an environmentally friendly society by providing optimized semiconductor solutions that pave the way to opening up this new field of business.

We are also fully committed to ensuring that society is safe and secure. In the automotive field, we developed IMAPCAR, a parallel processor for image-recognition applications in automobiles. IMAPCAR can be used to develop collision-avoidance systems, and has already been applied in numbers of areas. We have also developed a new technology that allows semiconductors to recover automatically from failures. By applying this technology in fields where high quality and reliability are essential, such as the



automotive, medical, and industrial robot fields, we can contribute to making a safe and secure society.

We feel that every person in the world has the right to live in a society that is safe, secure, and convenient. With this in mind, we are always looking to develop and produce products that meet people's needs at a low cost.

Our corporate social responsibilities extend beyond supplying products and contributing to society. CSR is an important part of all our daily business activities. In March of 2008, we joined the United Nations Global Compact, an extensive global corporate citizenship initiative and agreed to carry out business with corporate social responsibility. Our participation marks our commitment to incorporating the ten principles outlined in the Global Compact in the areas of human rights, labor standards, environmental protection and anti-corruption. The NEC Electronics Group believes that strict observance of these ten principles can not only improve its corporate value but also encourage the personal growth of all our employees at the same time. Through our CSR activities, we can enhance our commitment to corporate social responsibility and become a better corporate citizen.

This report reflects our achievements in the fields of CSR and environmental preservation in fiscal 2009, as well as our hopes and goals for the future. We value this opportunity to communicate with our stakeholders and strengthen our relationship of trust. We promise to continue building on these relationships and further raise our corporate value.

A handwritten signature in black ink, appearing to read 'J. Yamaguchi', written in a cursive style.

Junshi Yamaguchi, President and CEO  
NEC Electronics Corporation  
September 2009



# Toward a Green Society

The steps NEC Electronics is taking to help build a green society

Green is the word on everyone's lips. To reduce energy consumption and preserve the environment, we need to build a green society. To do this, we need new technologies and new systems. The NEC Electronics Group is committed to developing and producing semiconductors and semiconductor technologies that will help build a green society.



## Preserving the global environment by lowering our environmental impact

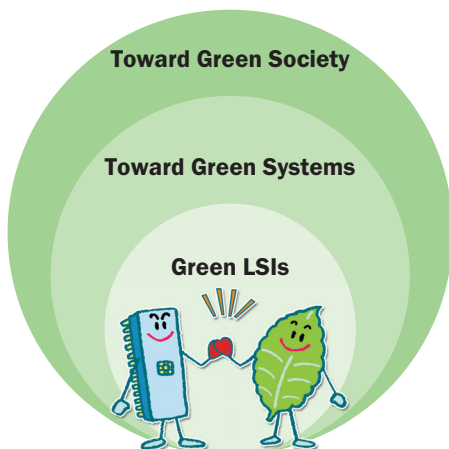
Since its establishment in 2002, the NEC Electronics Group has been taking steps to preserve the global environment by reducing the environmental impact of group operations. We have produced *green products*, which are energy efficient and contain no harmful chemicals. We have developed *eco factories*, which emit fewer greenhouse gases, use fewer chemical substances, and consume less energy. And we promote *eco communication* to make sure our customers and the public have up-to-date information on our environmental activities and how we control the chemicals used in our products—such as by creating lead-free devices.

### Environmental activities carried out by NEC Electronics



## Green-product activities: Saving energy and the environment

Countries throughout the world are developing products and systems, and building social infrastructures, that will reduce emissions of CO<sub>2</sub> and other gases that cause global warming—one of our most pressing environmental concerns. To support these efforts, the NEC Electronics Group produces green products that are energy saving and environmentally friendly. Our green-product activities aim to reduce the power consumption of electronic devices and systems, and encompass three steps: providing compact, low-power chips (*Green LSIs*); providing semiconductor solutions to revolutionize system energy use (*Toward Green Systems*); and providing solutions to enable the early realization and widespread adoption of systems that deliver revolutionary advances in energy efficiency (*Toward Green Society*).



### Toward Green Society

Be first with solutions for new systems. Contribute to **the early realization and widespread adoption of systems that will transform society.**



### Toward Green Systems

Solutions to **revolutionize system energy use**

Applications: Inverters, standby, networks



### Green LSIs

Provide **compact, low-power chips**

Base technologies: Design, process, HVIC, MRAM



## Green LSIs: Providing compact, low-power chips

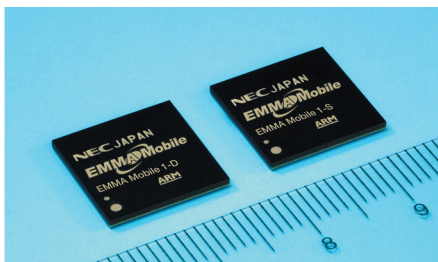
We develop advanced process and design technologies to provide low-power-consuming semiconductor products.

### Example

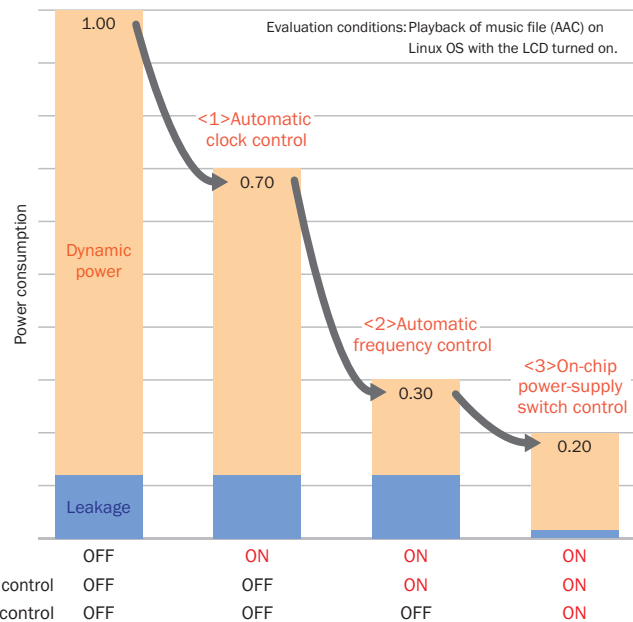
#### The next-generation multimedia processor *EMMA Mobile 1*:

“Enjoy quality audio visual anywhere, anytime”

Today's mobile devices are awash with sophisticated functions, from 1seg broadcasting (mobile TV in Japan) and video playback to web-browsing and music replay. Mobile device users want to enjoy these functions without hassle and for long periods of time. We therefore need to provide mobile technologies that deliver both advanced functionality and low power consumption. Using NEC Electronics' advanced power-saving technology, the next-generation multimedia processor *EMMA Mobile 1* can process equivalent amounts of video and audio data on less than half the operating power used by our conventional processors. With *EMMA Mobile 1*, you can realize a sophisticated mobile device that consumes extremely low levels of power.



EMMA Mobile 1, system LSI for portable audio-visual devices



Large decrease in power consumption

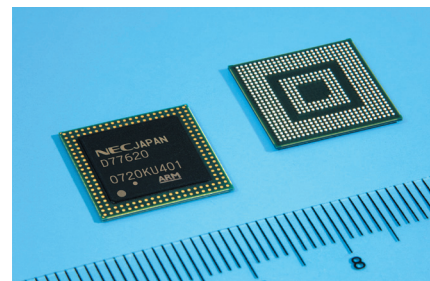
### Example

#### NEC Electronics' system LSI chip for mobile handsets is awarded Economy Minister's prize at 18th Global Environment Awards

A NEC Electronics system LSI chip featuring a baseband function for modulating mobile phone audio, image, and other data signals and an application function on a single chip was awarded the Minister of the Economy, Trade, and Industry prize at the 18th Global Environment Awards (sponsored by the Fuji Sankei Group and supported by the Ministry of Economy, Trade, and Industry, the Ministry of the Environment, the Ministry of Education, Science, Sport, and Culture, and the Ministry of Land, Infrastructure, and Transport). The system LSI chip was recognized for its low power consumption, which contributed significantly to realizing the longest talk and standby times in the mobile handset market. The LSI chip also helped reduce the total CO<sub>2</sub> emissions of the phone users and reduced environmental impact by incorporating multiple functions on a single chip, thereby reducing the number of components required.



Award ceremony



System LSI chip for mobile handsets

## Toward Green Systems: Providing solutions to revolutionize energy use by systems and appliances

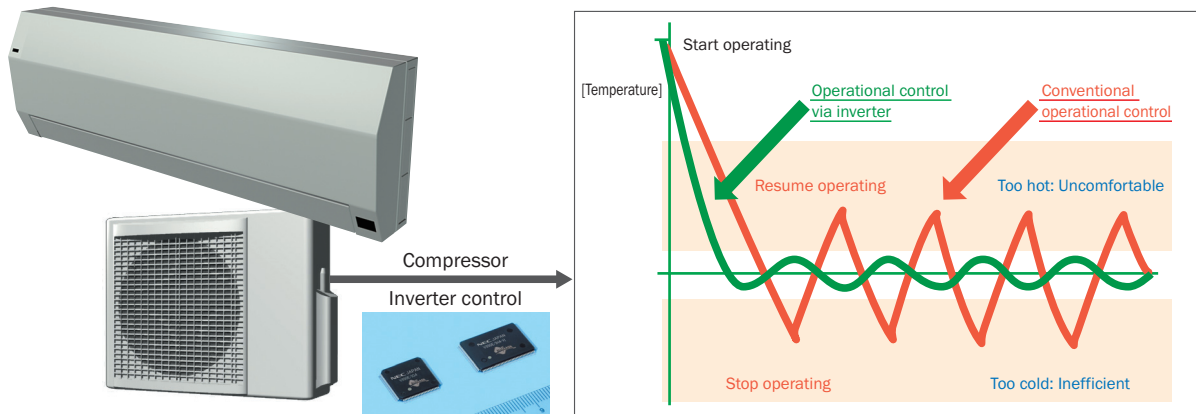
We provide semiconductor solutions that reduce power consumption by raising the energy efficiency of systems and appliances.

### Example

#### NEC Electronics' 32-bit V850 microcontrollers: "Enable inverter control in your air conditioners"

Air conditioners account for one quarter of household power consumption. Half of that power consumption is consumed by the compressor, which is used to cool the air. To reduce the power consumption of the compressor, the compressor motor must be made to work more efficiently. The key to doing this is to use a 32-bit V850 microcontroller. The V850 enables precision inverter control of the motor, raising its operating efficiency. And by using the V850 in combination with other NEC Electronics semiconductor products such as a photo coupler to electrically isolate the circuits and stabilize the output voltage, and a power MOSFET to reduce the power dissipation, the overall power consumption of the air conditioner can be reduced dramatically.

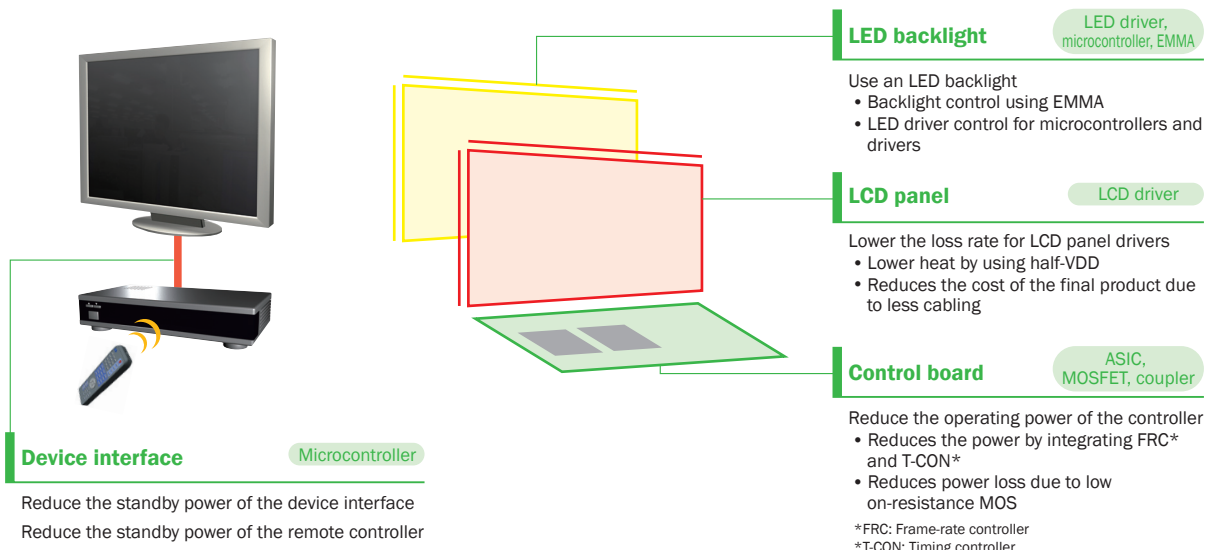
#### An energy-saving air conditioner that uses inverter control



### Example

#### Contribute to the energy efficiency and image quality of LCD TVs that support terrestrial digital broadcasting

Televisions that support terrestrial digital broadcasting—most commonly LCD TVs—are typical examples of environmentally friendly household appliances. Most of these TVs can now deliver a high-quality picture using only a little power. NEC Electronics semiconductor products play an important role in reducing the overall power consumption of television systems, from the microcontrollers and driver ICs used to control the liquid crystal panel and backlight to the digital AV EMMA system LSI chip used to process the images.

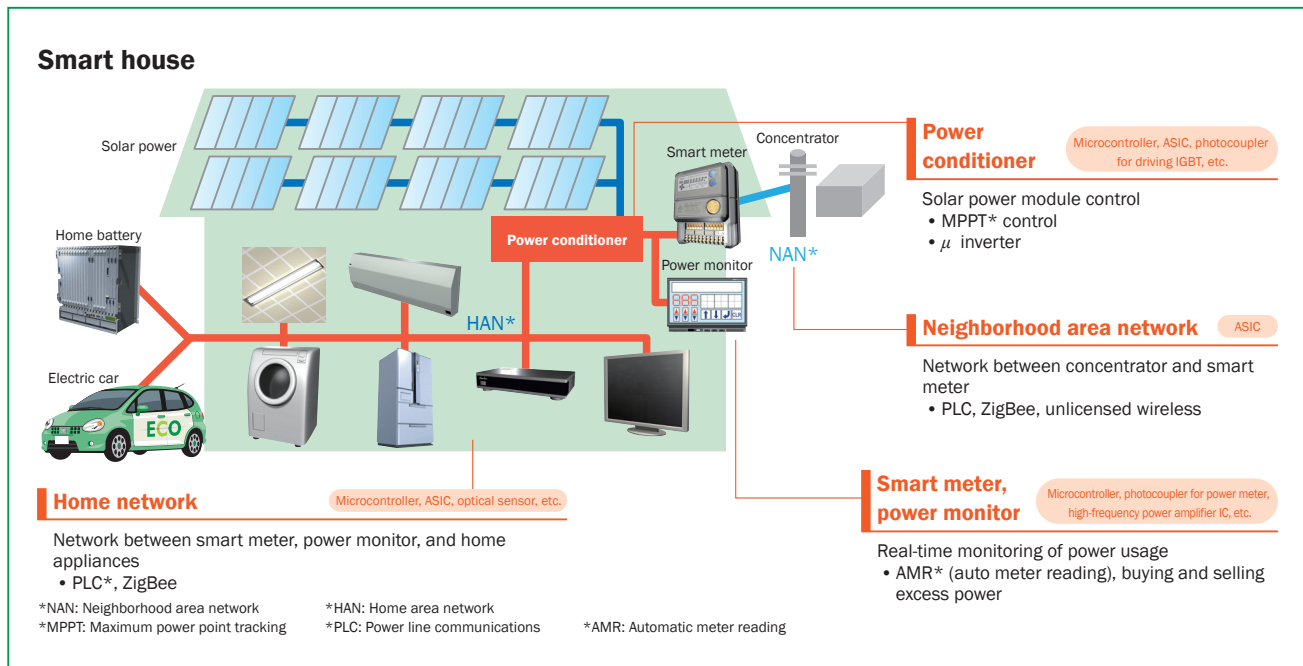


## Toward Green Society: Be first with solutions for new systems. Contribute to the realization and widespread adoption of systems that will transform society.

We provide solutions to enable the early realization and widespread adoption of systems that deliver revolutionary advances in energy efficiency.

The future of energy consumption is smart grids, sophisticated low-cost electricity networks that minimize inefficiencies by using advanced IT and communication technologies. Solar power generation and smart meters that come equipped with wireless communication and that can monitor power usage and control household appliances will be realized by semiconductors. Semiconductors will also be instrumental in developing new sets and systems that maximize limited energy resources, such as hybrid and electric cars—which are more fuel efficient than gasoline cars and which emit less CO<sub>2</sub>—and low-power-consuming, long-life LED lights. NEC Electronics provides solutions to enable the early realization and widespread adoption of these new systems, helping to build a green society that is kind to the environment.

### Supporting the early realization of smart power grids



### Supporting the widespread adoption of green cars



# III

## Management

<b>NEC Electronics Group CSR Management System</b> .....	<b>9</b>
Corporate Governance System .....	9
CSR Promotion System.....	10
Risk Management System .....	11
NEC Electronics Group Code of Conduct.....	12
Management of Confidential Information and Protection of Personal Information.....	13

# NEC Electronics Group CSR Management System

The Corporate Social Responsibility Promotion Committee is central to developing the CSR promotion system at NEC Electronics. In addition, we are strengthening corporate governance to maximize corporate value. For us, this means ensuring transparency and integrity of management and practicing compliance in accordance with our Code of Conduct.

## Corporate Governance System

### Our basic approach to corporate governance

The NEC Electronics Group believes that it is very important to ensure management efficiency, integrity, and transparency in order to continuously improve our corporate value. Therefore, we are striving to consolidate our internal control systems and enforce policies to provide total corporate governance.

NEC Electronics is a company with Board of Auditors as defined in the Japanese Companies Act. The board of auditors checks the actions of the board of directors and consists of full-time auditors and part-time auditors, including retired employees who have specialized business knowledge and experience.

The board of auditors with relevant divisions to collect high-quality information. This information is analyzed objectively from a variety of perspectives and is used to audit the board of directors.

NEC Electronics understands that this governance system is suitable and practical for us.

### Corporate Governance Measures

URL <http://www.necel.com/ir/en/governance.html>

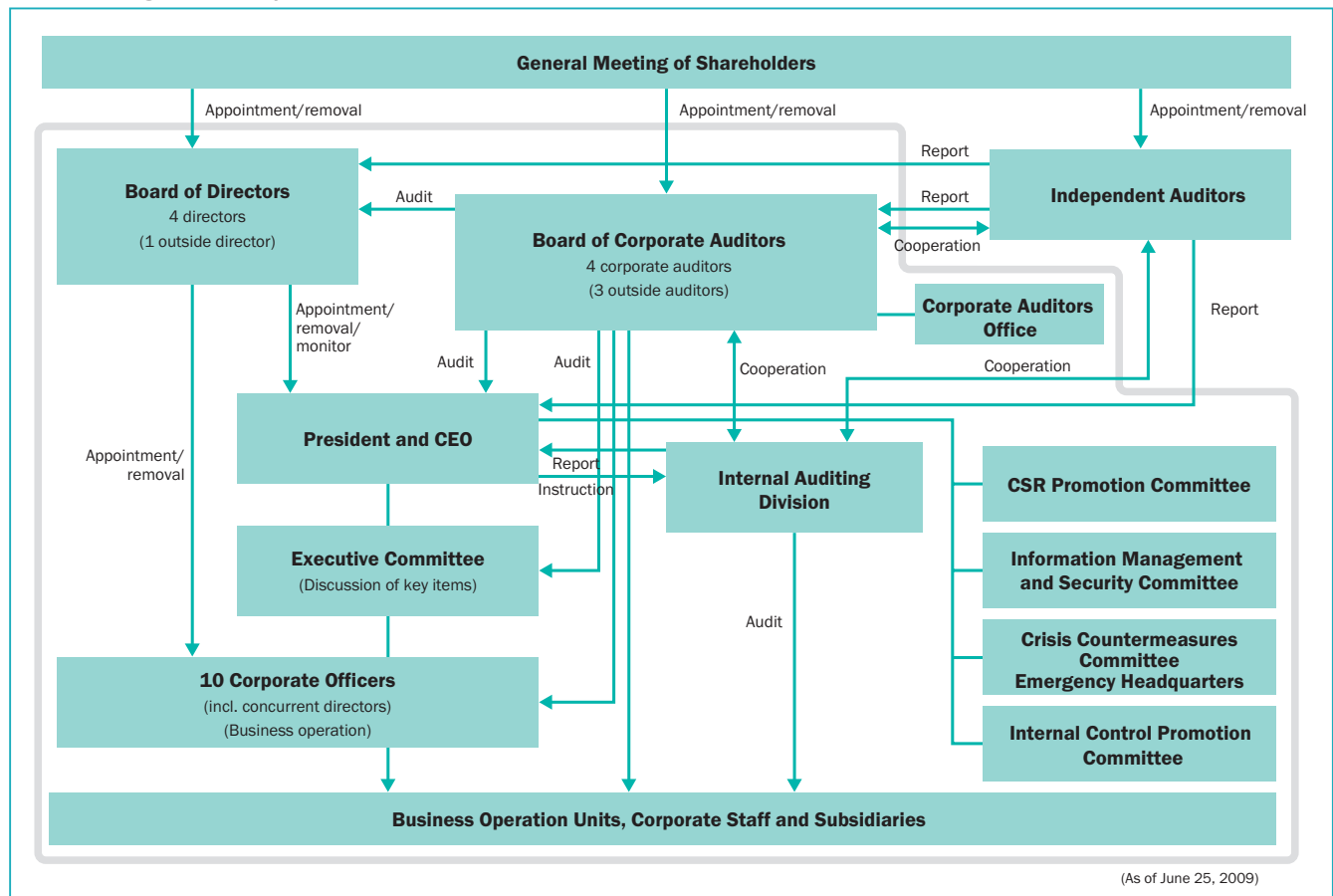
### Developing a corporate governance system to collectively manage our subsidiaries

NEC Electronics is strengthening its corporate governance system from the standpoint of Group governance.

The new Japanese Companies Act, which became effective in May 2006, gives companies more flexibility in structuring their organizations. In the wake of the new law, NEC Electronics modified its decision-making system in June 2006 to exercise more control over domestic subsidiaries. Specifically, we have increased items for deliberation at general meetings of shareholders and NEC Electronics participates directly in the decision-making process at the shareholder meetings of each of our subsidiaries to fortify corporate governance from a Group perspective.

We have also placed staff dedicated to internal auditing each of our Japanese subsidiaries. In the past, subsidiaries each had their own individual internal control system, but now the internal auditors

## Corporate governance system



(As of June 25, 2009)



handle such activities with the support of the Internal Auditing Division at NEC Electronics to reinforce consistency in activities implemented throughout the entire group.

Overseas subsidiaries are following suit by expanding standards for deliberation by boards of directors and also formulating uniform rules to simplify processes for authorization by the board of directors to achieve effective and easily comprehensible systems for corporate governance.

We are now in the process of examining mechanisms for bringing the individual internal auditing practices of overseas group companies in line with those of the internal Auditing Division at NEC Electronics.

## CSR Promotion System

### We promote CSR with strong teamwork throughout NEC Electronics divisions and its subsidiaries.

We have established the NEC Electronics Guiding Principles to clarify policies for group-wide CSR promotion activities, and also set up a CSR Promotion Committee to provide management guidelines for CSR promotion at the Company and its subsidiaries, making our position on CSR known within and outside the Company.

#### NEC Electronics Group Guiding Principles

NEC Electronics recognizes that it is essential to build a solid relationship of trust and cooperation with all of our stakeholders. When we listed on the stock market in July 2003, we committed to a transparent and trustworthy style of management and have been working hard to ensure it ever since.

In June of 2004, we established the NEC Electronics Group Guiding Principles, a list of management policies related to CSR that are shared by all companies in our group, to clarify our group's social responsibilities.

## NEC Electronics Guiding Principles

At NEC Electronics, we are dedicated to cultivating trust with every individual and organization, including customers, shareholders, investors, trading partners, and employees.

We pledge to conduct our business with integrity, beyond legal compliance, by acting responsibly as concerned corporate citizens, while providing superior semiconductor solutions based on advanced technologies.

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#### Customer Focus

To provide optimized solutions and comprehensive support that exceed the highest expectations of our customers and earn their unwavering loyalty.

#### Ethical Business Practices

To promote free and fair market competition through transparent and ethical business practices, which are conveyed to the public through our actions and communications.

#### Community Involvement

To implement activities that contribute to both local and international communities, while respecting the history, culture, and human rights of each region.

#### Environmental Protection

To promote sustainable development by minimizing the environmental impact of our products throughout their entire life cycles.

#### Corporate Culture

To foster a corporate culture that respects individuality and encourages innovation, where all employees are proud to be part of the NEC Electronics team.

### CSR Promotion Committee

In June of 2004, we set up the CSR Promotion Committee, which is chaired by the president of NEC Electronics, to enforce our group's Guiding Principles. The CSR Promotion Committee discusses matters that are important for promoting our group's CSR and related activities.

### CSR tasks

Category	CSR tasks
Common items	Promotion of compliance (ethical and legal) and enhancement of risk management and information security
Customer focus	Customer satisfaction improvement, quality improvement, product accident response
Ethical business practices	Fair trade (compliance with antitrust regulations, etc.), relationships with purchasing partners, security export control (compliance with laws and regulations governing exports), donations to political and other organizations, information disclosure and communication
Community involvement	Communication with local communities, community involvement activities
Environmental protection	Environmental management
Corporate culture	Occupational health and safety, employment for physically challenged people, equal employment opportunities, human rights/discrimination prevention, education and training programs



**We participate in the United Nations Global Compact and are improving our CSR activities.**

In recent years, as a result of rapid economic globalization, human rights violations and unfair labour practices in developing nations have become social problems. For a long time, we have worked to promote CSR activities that address human rights and labour condition problems based on the NEC Electronics Group Guiding Principles, and, to emphasize our position on these issues, we started participating in the United Nations Global Compact in March of 2008.



The Global Compact was announced at the World Economic Forum in January of 1999 by Kofi Annan, the Secretary-General of the United Nations at that time, and is a list of 10 principles that corporations are requested to follow and enforce intended to deal with problems related to human rights, labour standards, environmental protection, and anti-corruption. Since the Global Compact was officially launched at the UN Headquarters in New York in July of 2000, more than 90 corporations and groups in Japan, and approximately 7,000 corporations and groups worldwide, have declared that they agree with the principles and are participating.\*

Our group's business approach is based on the 10 principles of the Global Compact, and our executives and employees continuously receive training to ensure that this approach is well understood and to increase the awareness of the principles during everyday work.

\* As of July of 2009

**The Ten Principles of the United Nations Global Compact**

**Human rights**

- Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights; and
- Principle 2: make sure that they are not complicit in human rights abuses.

**Labour**

- Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;
- Principle 4: the elimination of all forms of forced and compulsory labour;
- Principle 5: the effective abolition of child labour; and
- Principle 6: the elimination of discrimination in respect of employment and occupation.

**Environment**

- Principle 7: Businesses are asked to support a precautionary approach to environmental challenges;
- Principle 8: undertake initiatives to promote greater environmental responsibility; and
- Principle 9: encourage the development and diffusion of environmentally friendly technologies.

**Anti-corruption**

- Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery.

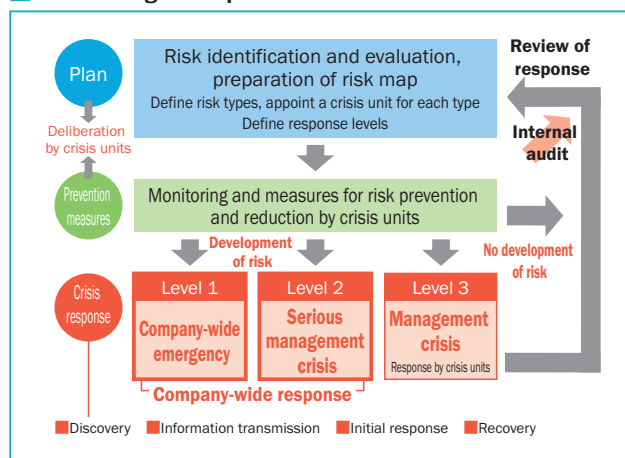
**Risk Management System**

**NEC Electronics has established Basic Rules for Risk Management and has also clarified its policies for handling risk management and responding to crises.**

Formerly, NEC Electronics implemented a system of risk management that divided responsibilities among its divisions. In July 2006, we formulated Basic Rules for Risk Management. We have built a system for uniform company-wide implementation of risk management activities that play a central role in internal control.

NEC Electronics has created a comprehensive risk management system that encompasses daily risk management and enables uniform response in the event of crisis. A variety of management crises are categorized by frequency of occurrence and degree of severity and a crisis unit is set up for each category to perform the work of daily risk management related to the category. The crisis units are also responsible for predetermining response mechanisms should a management crisis occur.

**Risk management process**



**Business Continuity Plans**

NEC Electronics is formulating and strengthening business continuity plans (BCPs) as part of the effort to reinforce the risk management system. In the wake of the series of terrorist attacks on the United States on September 11, 2001, and the occurrence of large hurricanes, major earthquakes, and other large-scale natural disasters, companies are obliged to formulate BCPs for rapid recovery and continuity of business in preparation for damage arising from unforeseen circumstances. NEC Electronics has also been devising and improving its BCPs. Specifically, while using existing plans for disaster prevention and systematic evacuation, we've built a new system for quick recovery and continuing business activities.

The NEC Electronics Group places emphasis on the risk of earthquake damage to our headquarters and factories in Japan. We are currently updating the BCP that we devised in fiscal 2008 to use if there is an earthquake in Japan. We are also expanding the risks covered by BCPs to enable us to respond to situations such as the large-scale spread of highly contagious diseases such as the new strain of influenza that appeared this year.

## NEC Electronics Group Code of Conduct

**The NEC Electronics Group Code of Conduct establishes rules for the conduct of executives and employees in Japan.**

### The NEC Electronics Group Code of Conduct

In June 2003, NEC Electronics established the NEC Electronics Code of Conduct to promote compliance by prescribing compliance matters to be observed by the company's executives and employees in the conduct of their daily business activities.

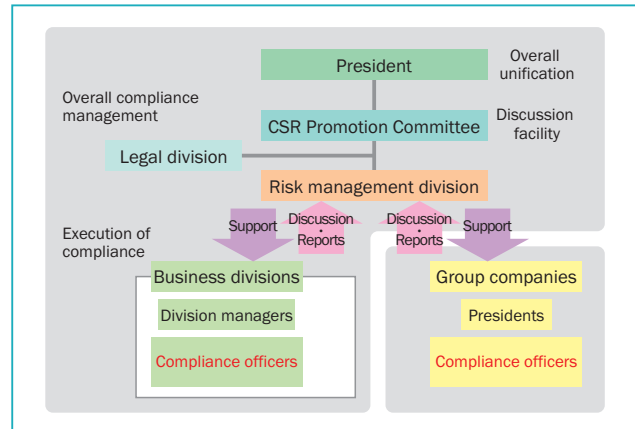
All of our subsidiaries are developing their own codes of conduct modeled on the NEC Electronics Code of Conduct, which is partially modified as necessary to meet the requirements of relevant laws, regulations, and social codes of the country where each subsidiary is located. With the establishment in 2006 of the Company Law in Japan, the company decided to extend its code of conduct to all domestic subsidiaries. The new NEC Electronics Group Code of Conduct was created in July 2006, and all group companies in Japan must now follow this code.

### Compliance promotion system

The legal division at NEC Electronics is the primary unit responsible for promoting compliance. It does this by creating a compliance system and supporting its implementation in domestic group companies, and also by organizing education programs and awareness-raising activities related to compliance in general.

Compliance officers are appointed at NEC Electronics divisions and subsidiaries to assist the general managers and presidents of domestic group companies to promote compliance.

## Compliance promotion system



### Compliance promotion activities

To prevent compliance violations, NEC Electronics also categorizes compliance risks and has internal units to help address each type of risk. Units are responsible for developing rules and manuals, raising employee awareness of compliance issues through education and information provision, and monitoring compliance. These efforts are noted on each compliance risk page on the internal website along with information that shows at a glance which unit to contact and which company rules to refer to if the corresponding problem is encountered. In this way, we hope to prevent problems from arising and to solve problems that do arise immediately.

### Compliance education programs and information transmission

NEC Electronics conducts compliance education programs for new employees, assistant managers, and managers, and also provides compliance education for all executives and employees once a year.

We also provide e-learning programs that address compliance risks. In fiscal 2008, we conducted training courses in information security, and issues concerning the environment, sexual harassment, and power harassment.

Through our company intranet and monthly mail magazine for employees, we are working to provide substantial information on compliance. The mail magazine contains a section called "The NEC Electronics Group Code of Conduct Case Sheet", which presents case studies of compliance-related issues employees are likely to encounter and easy quizzes on compliance. These are particularly effective in helping employees become more familiar with compliance issues.

### Helpline for Discussion and Reporting

To detect and readily resolve issues involving compliance violations, we set up a company helpline in June 2003 for NEC Electronics employees to discuss and report problems that for various reasons they are unable to take to a supervisor or relevant department.

In July 2006, we named the helpline the NEC Electronics Group Helpline. The helpline is available not only to employees at NEC Electronics but also to employees in our domestic group companies, purchasing partners, and distributors. We have also set up helplines in third-party facilities so that people who want to discuss or report problems but have their names withheld can be guaranteed anonymity, which should make it easier for them to provide information.

We have established rules prohibiting employees who use the helpline from being penalized to enable employees to report or discuss their concerns confidently without fear of retribution or negative consequences. The rules are available on the internal website.

We also have a system in place for reporting the content of helpline reports and discussions as necessary to a committee chaired by the president so that top management can share information on compliance risks.

### Management of Confidential Information and Protection of Personal Information

In March of 2005, we set up the Information Management Security Committee, which is chaired by the president of NEC Electronics, to promote discussion and planning related to our group's important policies for and enforcement of information management, including managing confidential information and protecting personal information.

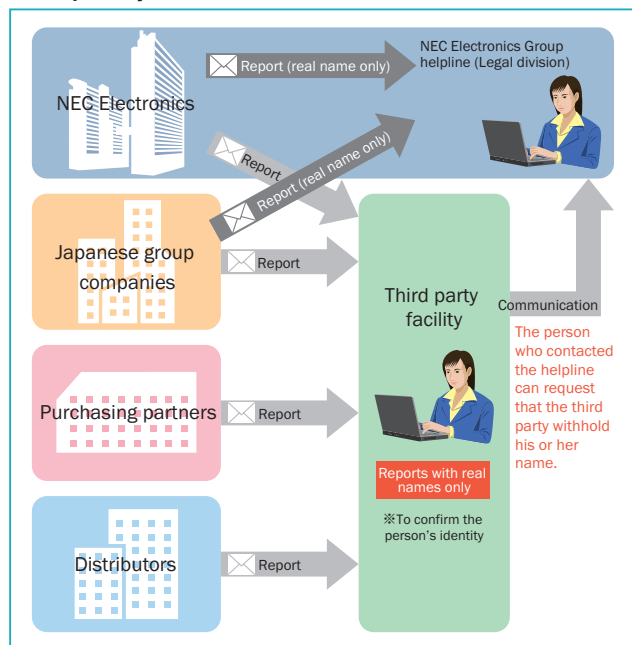
Based on the policies devised by this committee, the legal department cooperates with relevant departments to draw up detailed plans for managing confidential information and protecting personal information, and then ensures that the plans are executed by company-internal divisions and domestic group companies.

Each company-internal division and domestic group company appoints an information management manager and information management officers to act as assistants, and the officers are primarily responsible for carrying out the information management activities of each division and domestic group company.

Confidential information and personal information are managed as described in the *Basic Rules for Confidential Information Management* and *Rules for Personal Information Protection*, respectively.

Also note that, in April of 2005, we established our approach and policies for personal information protection in the *Privacy Policy*, which is at our website.

#### Helpline system



# III

## Social Responsibility

<b>Policies and Activities for Improving Customer Satisfaction.....</b>	<b>15</b>
Basic Policies for Promoting Customer Satisfaction.....	15
Customer Communication.....	15
Awareness of Customer Satisfaction among Employees.....	16
Semiconductor Hotline .....	16
<b>Quality Improvement Strategies.....</b>	<b>17</b>
Quality Policy Implementation.....	17
Quality Management System .....	17
<b>Quality Improvement and Product Safety .....</b>	<b>18</b>
Total Quality Improvement and Product Safety.....	18
Assuring the Environmental Quality of Our Products.....	19
Industry Standardization Activities .....	19
<b>Approach to Transparent Management .....</b>	<b>20</b>
Investor Relations .....	20
Open Shareholders' Meetings .....	20
<b>Working Together with Purchasing Partners .....</b>	<b>21</b>
Procurement Policies.....	21
CSR Requirements.....	21
<b>Working Together with Sales Partners .....</b>	<b>23</b>
Strengthening Partnerships with Distributors in Japan .....	23
Strengthening Partnerships with Overseas Sales Partners.....	23
<b>Community Involvement.....</b>	<b>24</b>
Social Contribution Activities by NEC Electronics and Group Companies.....	24
Volunteer Activity Support System.....	24
NEC Electronics' Community-based Activities .....	24
NEC Electronics' Forest Conservation Activities .....	25
Community Involvement by Group Companies .....	25
Partnership with NEC Corporation .....	25
<b>Respect for Human Rights and Equal Opportunity Practices .....</b>	<b>26</b>
Respect for Human Rights .....	26
Employment for Physically Challenged People .....	26
Balancing Work and Family Life.....	26
<b>Human Resource Development and Communication .....</b>	<b>28</b>
Human Resource Development.....	28
Communication.....	28
<b>Occupational Health and Safety.....</b>	<b>29</b>
Occupational Health and Safety .....	29
Mental Health Management.....	29

# Policies and Activities for Improving Customer Satisfaction

NEC Electronics makes every effort to improve customer satisfaction through direct communication with customers so as to reflect the voice of the customer in our products and services and in our business activities.

## Basic Policies for Promoting Customer Satisfaction

We are working to increase our customers' satisfaction in our products and confidence in our company, as well as doing our part to improve quality of life.

At NEC Electronics, our basic policies for promoting customer satisfaction are speedy provision of high-performance, high-quality semiconductor products and provision of solutions that create added value for the customer. Based on these policies, each employee in our sales, development, manufacturing, and administration divisions keeps the customer uppermost in mind when carrying out their work.

### Concept of customer satisfaction management



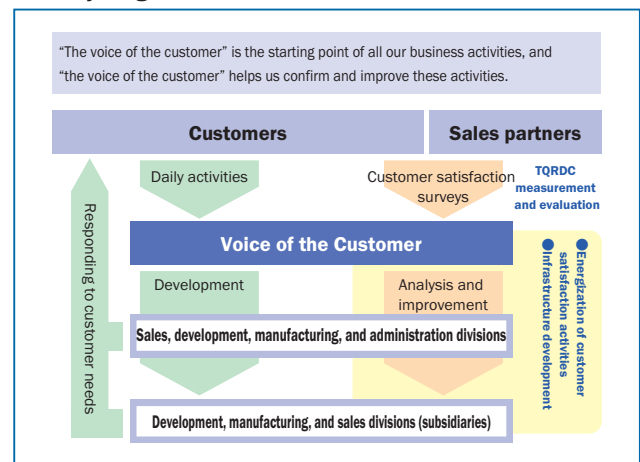
## Customer Communication

We are pursuing customer satisfaction through surveys that measure satisfaction levels.

At NEC Electronics, we receive information on customer needs and related matters from our customers and sales partners on a daily basis. In addition, we regularly conduct surveys to measure the satisfaction levels of each of our customers and sales partners.

The results of surveys are grouped into five categories according to the satisfaction element—Technology, Quality, Responsiveness, Delivery, and Cost (TQRDC)—analyzed, and findings are used to improve products, services, and business activities.

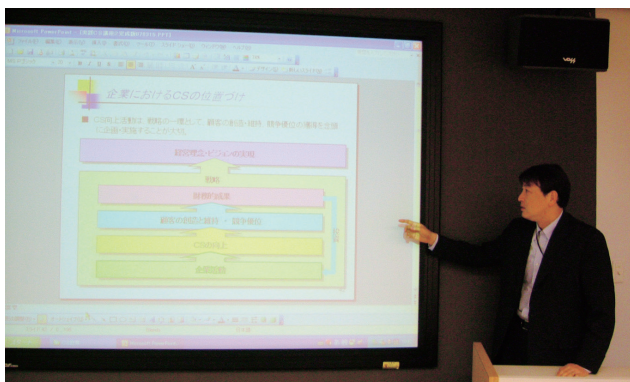
### Everything starts with the voice of the customer



## Awareness of Customer Satisfaction among Employees

We conduct a customer satisfaction education program to raise employees' awareness of customer satisfaction issues.

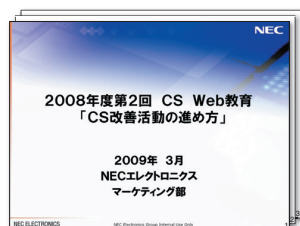
NEC Electronics conducts a level-specific education program that includes customer satisfaction education and utilizes e-learning to instruct all employees in matters related to customer satisfaction so as to raise each employee's awareness of customer satisfaction issues.



A customer satisfaction education session



Level-specific educational materials



E-learning materials

Customer satisfaction educational materials

## Semiconductor Hotline

We have set up a Semiconductor Hotline to respond to inquiries related to products and services.

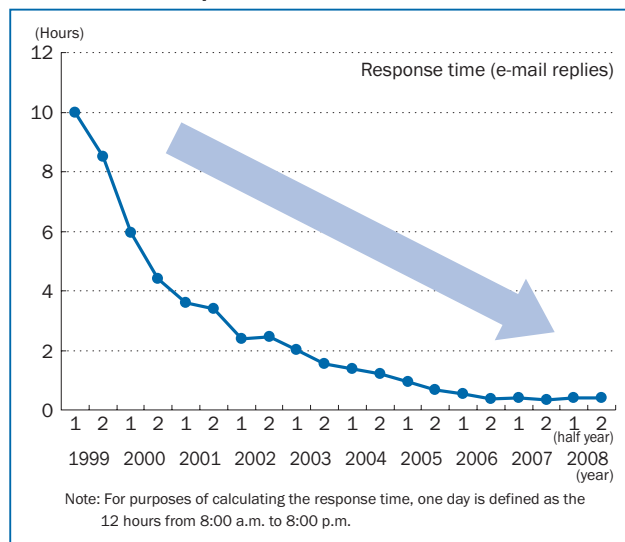
NEC Electronics has set up a Semiconductor Hotline to provide a variety of technical information on products in order to help customers use our products and services safely, correctly, and effectively.

In fiscal 2008, we received approximately 2,800 inquiries by phone and e-mail from customers in and outside Japan. The Semiconductor Hotline endeavors to respond to inquiries as quickly and accurately as possible. We reply to almost 100% of e-mail inquiries within four business hours after receiving them.

Feedback on customer inquiries is relayed to all NEC Electronics divisions so that they can reflect the customer's voice in improvements made to products and services. In addition, the FAQ (Q&A collection) on our website answers commonly asked questions and questions about key matters are made public to facilitate information disclosure to customers.

We also regularly review the FAQ to make it more comprehensive.

### Reduction in response time of Semiconductor Hotline



# Quality Improvement Strategies

As a vendor of total semiconductor solutions and services, the NEC Electronics Group leverages advanced technologies to develop and provide high-quality and highly reliable products, and pursues customer satisfaction through organized activities carried out by the entire NEC Electronics Group to ensure total quality improvements that focus on overall optimization.

## Quality Policy Implementation

We have defined a quality policy for continuous improvement of total quality so that customers can use our products with confidence.

The NEC Electronics Group determines quality objectives for each fiscal year in line with a quality policy that embodies the top management commitment, and implements activities to achieve these objectives in all stages of business including sales, development, and manufacturing to continuously improve total quality.

Based on the quality objectives, business lines set priority tasks for quality improvement in each half of the fiscal year, and formulate and implement plans to achieve their goals. These plans are implemented utilizing a fiscal half-year cycle of progress verification, re-examination, and improvement of quality improvement tasks.

### The NEC Electronics Group Quality Policy

We aim to provide high-quality and highly reliable products and services that satisfy customer requirements and trust. We abide by the following principles in all stages of our business activities—including sales, development and manufacturing—in accordance with our corporate quality management system:

- Comply with all applicable laws and regulations.
- Prevent product safety problems.
- Strive to continuously improve quality.

## Quality Policy Implementation Process



## Quality Management System

NEC Electronics Group is developing and implementing a quality management system in conformity with the ISO 9001 and ISO/TS 16949 standards so as to enhance customer satisfaction.

The NEC Electronics Group implements a quality management system group-wide that encompasses every process from development to manufacturing and product delivery, and provides high-quality and highly reliable products and services for further customer satisfaction.

In view of the fact that we supply products to many companies associated with automotive production, we are building mechanisms that conform with automotive sector standards to make quality improvements that meet customers' specific requirements.

All NEC Electronics Group companies have acquired corporate certifications for ISO 9001, which is an international standard, and ISO/TS 16949, which is an automotive sector standard.



ISO 9001 Certificate of Registration

ISO/TS 16949 Certificate of Registration



# Quality Improvement and Product Safety

We apply management indexes to all phases of business including sales, development, and manufacturing in order to continuously improve total quality. We also coordinate with industry groups to improve our quality management system so that the quality of our products can be assured even after they are used in a customer's application. The process of quality improvement includes product safety risk inspections and compliance with various business and environmental laws and regulations to promote the development of safe, reliable products.

## Total Quality Improvement and Product Safety

**We build quality into products and promote product safety throughout the development, manufacturing, and customer support processes.**

### Development process

NEC Electronics continuously works on developing advanced design methods and evaluation techniques appropriate for the latest product design rules related to products based on shrinking transistor dimensions and large-scale circuitry.

To build quality into products, we also utilize the DRBFM (design review based on failure mode) method for design reviews (DR) conducted at each key stage of the design process to focus on design changes and modifications.

In addition, we are applying the CMMI® (Capability Maturity Model Integration) model to standardize our software design methods and execute more advanced project management so as to improve the quality of our software products. In fiscal 2008, we attained CMMI level 3.

### Manufacturing process

To ensure reliable manufacturing of products, we are undertaking improvement of 4M (Man, Machine, Material, Method) management. We also are implementing scientific methods to manage manufacturing processes in combination with activities that place importance on human sensitivity to abnormalities on production lines in order to build quality into products in all of our group companies. Product quality is thoroughly controlled by taking steps to ensure that defective products do not leave the factory. This is achieved by implementing procedures to detect and correct abnormalities at an early stage in production.

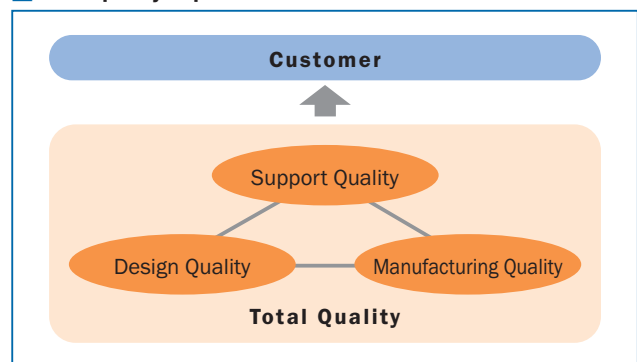
### Support process

We provide product information and solutions to support our customers at every stage from customer product development to logistics and maintenance, and also have a response system in place to answer customer inquiries so that our customers can use our products with confidence.

### Product safety

To promote the safe use of our products by our customers, we undertake various activities including designing appropriate product specifications and providing documents with accurate product information and information pertaining to environmental regulations.

### Total quality improvement



## Talking about CSR

### We provide our customers with reliable products and services

Semiconductors are used in a variety of applications. We define the target quality according to how the semiconductor will be used, and build in the quality to the product from the design stage in order to provide our customers with reliable products.

Accordingly, we recommend products with a suitable quality grade according to their use, so as to satisfy our customers' quality requirements.



Hiroyuki Taninaka, Corporate Quality Assurance Division

## Assuring the Environmental Quality of Our Products

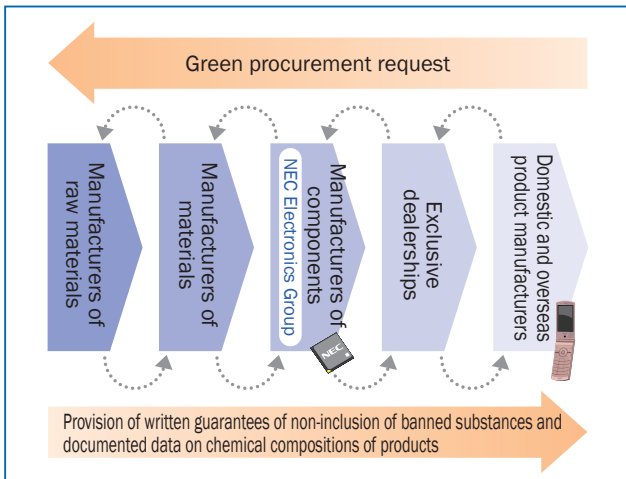
### NEC Electronics promotes the regulation of hazardous substances used in products throughout the entire supply chain.

In light of today's strict regulation of specified hazardous substances in products, NEC Electronics has developed and is implementing a system for regulating hazardous substances in all processes. This system encompasses the selection of components and materials at the design and development stage and the prevention of pollution in production processes. Because hazardous substances must be regulated throughout the entire supply chain, we ask purchasing partners to provide us with written guarantees that supplied products do not contain banned substances and with documented data on the chemical composition of supplied products. We also execute supplier environmental management audits to confirm the efficacy of their environmental management systems, and direct our sales partners to regulate hazardous substances used in packaging materials.

We also provide customers with written guarantees that products do not contain banned substances and documented data on the chemical composition of products, so that they can use our semiconductor products with confidence. Also, in order to be approved as a green partner by customers, we have them confirm the mechanisms we have in place and the progress of activities being undertaken to regulate hazardous substances.

On June 1 2008, the European Chemicals Agency started implementing REACH management. It is now more important than ever to carry out detailed chemical substance management throughout the entire supply chain. The management system we have built will allow us to achieve appropriate REACH compliance.

### Hazardous substance regulation throughout the entire supply chain



## Industry Standardization Activities

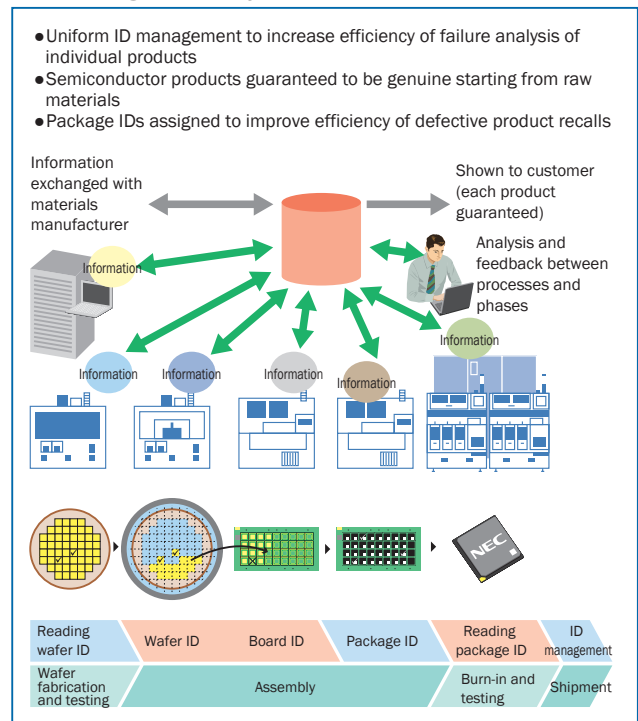
### Standardization activities related to quality and reliability

As part of our quality management activities, we are taking steps to improve the traceability of our semiconductor products in the manufacturing and distribution phases. Traceability is important, especially in systems where a failure could cause serious damage. Take automotive products for example. If a failure occurs in one of the electronic control systems used to make cars run, stop, and turn, someone's life could be at stake. In terms of semiconductor products, traceability means including an indentifying symbol on each semiconductor that tells us where and when that product was manufactured and shipped, allowing us to identify failure locations and causes quickly, and prevent the occurrence of similar failures.

We are very active in international efforts to create global traceability standards, joining the SEMI\* Standard Traceability Committee in June 2007.

\*SEMI stands for Semiconductor Equipment and Materials International, and is a trade organization of manufacturers of equipment and materials used in the fabrication of semiconductors and related technologies. Standards created by SEMI are a mainstay of the industry and are used widely by semiconductor manufacturers throughout the world.

### Improving traceability to meet customer needs



# Approach to Transparent Management

The NEC Electronics Group is an innovative company that proactively practices transparent management through timely and fair disclosure of appropriate corporate information and other activities that promote sincere and honest communication.

## Investor Relations

**We are strengthening relationships of trust with shareholders and investors and creating a more favorable financing environment for the future.**

NEC Electronics makes a sincere effort to practice timely, fair, and appropriate disclosure of information concerning important matters that may affect investment decisions such as corporate management strategies and earnings. By doing so, we hope to build strong relationships of trust with our shareholders and investors, and continuously improve management transparency.

In addition to creating a favorable financing environment and raising our corporate value for the future, we believe that another important objective of investor relations activities involves improving the quality of management. We regularly report opinions and assessments of capital markets to the management team for further improvement.

### Summary of investor relations activities

We are expanding our IR website to facilitate fair disclosure of information to all of our individual and institutional shareholders and investors in and outside Japan. Our IR website makes available a variety of IR-related reports including quarterly financial reports and annual reports, stock quotes, and information on IR events. Materials of financial results meetings and corporate strategy meetings hosted by the president for institutional investors and financial analysts are promptly placed on our IR website in both English and Japanese along with audio files. We have also established a web page dedicated to individual investors to promote better understanding of the company by providing comprehensive information.



Financial results meeting

### IR website

**URL** <http://www.necel.com/ir/en/>

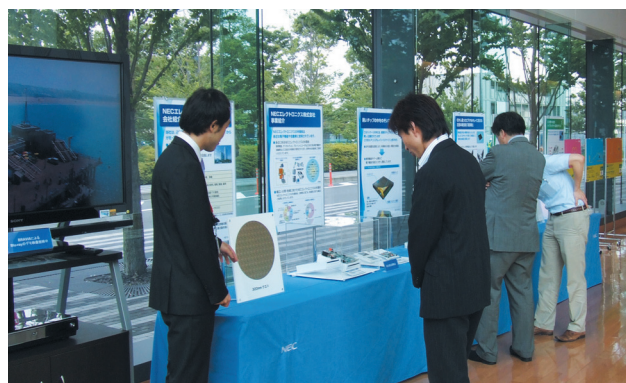
## Open Shareholders' Meetings

**Our general shareholder meetings are open for direct dialogue with shareholders.**

NEC Electronics believes shareholders' meetings are an important occasion for direct dialogue with shareholders and makes every effort to organize meetings to fulfill that function. This includes sufficient notice of shareholder's meetings by sending invitations to shareholders three weeks in advance and displaying exhibits in the meeting venue that introduce our products and technologies with the aim of promoting a deeper understanding of our business.



The venue for shareholders' meetings



An exhibit introducing products and the applications they are used in

## Talking about CSR

**Carrying out IR activities that promote honest and transparent communication with our shareholders and investors**

As a listed company, it is our job to provide our shareholders and investors with timely, fair, and up-to-date information on our corporate activities.

We also make sure that this information is clear and easy to understand.



Masatoshi Kakuchi, Corporate Communication Division

# Working Together with Purchasing Partners

We procure high-quality materials and services from global markets at reasonable prices within required delivery times, and work to raise the corporate value of our customers, our purchasing partners, and the NEC Electronics Group.

## Procurement Policies

**We provide opportunities for fair competition, and engage in fair, impartial, and open business dealings.**

Since its establishment, the NEC Electronics Group has given priority to green procurement, purchasing materials and equipment with minimum impact on the environment, from purchasing partners who care for the environment.

In fiscal 2004, we started implementing CSR activities across our entire supply chain, ensuring that our purchasing partners' actions accorded not only with our green procurement policies, but also that they met our requirements in areas such as compliance, risk management, and human rights protection. Gaining the cooperation of our purchasing partners in our supply chain and working in partnership with them is essential to promoting our CSR activities.

### Procurement Policies

1. Provision of opportunities for fair competition  
Information on procurement is provided in an appropriate and timely manner so as to provide opportunities for fair competition to all companies, both domestic and overseas, who express an interest in working with us.
2. Evaluation and selection of partners in a fair manner  
We employ a comprehensive partner evaluation and selection process that considers the reliability of the potential partner's management system, as well as the prices, quality, delivery dates, and advanced technologies of the products to be procured, and the partner's CSR policies.
3. Development of mutual trust  
We value communication with our partners and always strive to form relationships of mutual trust which will grow stronger in the years to come.
4. Management and protection of information  
We recognize the value of the information that we obtain through our purchasing transactions and manage it appropriately.

### Website for purchasing partners

**URL** <http://www.necel.com/procurement/en/>

## CSR Requirements

**We incorporate CSR in all our procurement activities.**

### Disclosure of CSR guidelines

We seek to strengthen cooperative relationships with purchasing partners across the supply chain so that we can provide products desired by customers and society.

We have therefore formulated *CSR Guidelines for Purchasing Partners* presenting points which we would like our purchasing partners to observe and put it on our public website.

\*These guidelines conform to the *Supply Chain CSR Promotion Guidebook* published by JEITA (Japan Electronics and Information Technology Industries Association).

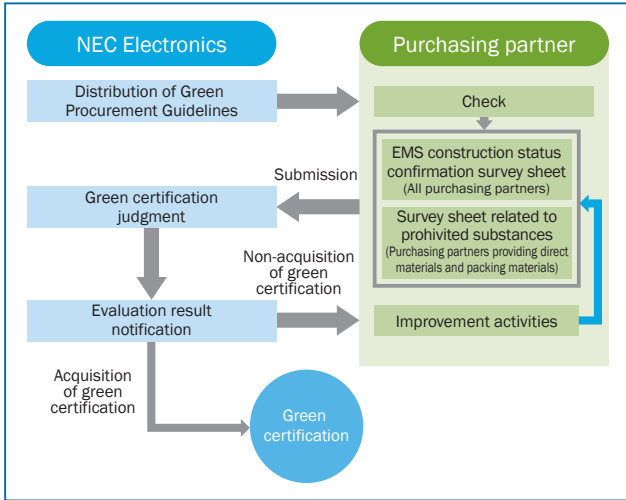
### Promotion of green procurement

Green procurement means purchasing from partners who have completed a survey of their efforts toward environmental protection, have proved that they satisfy the requirements of NEC Electronics, and have acquired from us *green certification*. We comply with environmental regulations such as RoHS by obtaining the understanding and cooperation of our purchasing partners.

### Green procurement requirements

Type of procured item	Requirement for partner (evaluated on a partner-by-partner basis)	Requirement for product (evaluated on a product-by-product basis)
Direct materials, Packing materials	Must have created an environmental management system	<ul style="list-style-type: none"> <li>• Must not use substances banned in manufacturing processes</li> <li>• Must not use substances banned from use in products</li> <li>• Must have a system that ensures the total abolition of substances banned from use in products</li> <li>• Must have a system that ensures cooperation in carrying out surveys about chemical substances in products</li> </ul>
Indirect materials, Facilities Etc.	Must have created an environmental management system	—

**Green procurement process**



Awards ceremony

**Business continuity planning**

Purchasing partners are required to notify NEC Electronics immediately in the event of a natural disaster or major accident. We have a system in place to ensure that information from our partners reaches the people concerned immediately, regardless of when the disaster or accident occurred.

**Rewarding our purchasing partners**

We held a commendation ceremony in June to recognize purchasing partners that demonstrated excellence in fiscal 2009.

**Talking about CSR**

**NEC Electronics has to be a company that our purchasing partners can trust**

To build a fair and honest business relationship with our purchasing partners, we must first ensure that all our own operations are above board, ethical and appropriate.

To do this, we conduct regular audits of our internal operations and take steps to resolve problems at an

early stage. It is vital that we remain a company that our purchasing partners, and in fact all our stakeholders, can trust.



Naoki Okamoto, NEC Semiconductors Kansai



# Working Together with Sales Partners

The NEC Electronics Group makes ongoing, proactive efforts to strengthen partnerships with sales partners, whose close cooperation is indispensable in providing products and services to the market, and in building relationships of trust with customers.

## Strengthening Partnerships with Distributors in Japan

We are gaining a competitive advantage through teamwork with distributors.

### Executive meetings

NEC Electronics holds regular meetings each half of the fiscal year with the executive teams of our distributors to strengthen partnerships at the management level, exchange information on trends in the electronics and semiconductor markets, and determine mutual tasks we need to undertake.

### Support for sales training

NEC Electronics offers a variety of training courses and product information courses to help our distributors' sales staff and sales engineers acquire the knowledge and skills they need to sell our products.

During the course of a year, we offer training courses designed to substantially raise the technical and sales skills of our distributors' staff. More than 1,000 people attend these courses each year.



Sales staff training

### Design-Win Grand Prix

The Design-Win Grand Prix was conceived to honor sales staff and sales engineers whose outstanding achievements in sales and technical support contributed to improved customer satisfaction. Design-Win Grand Prix awards are given to top achievers based on evaluations of essays and presentations by candidates introducing sales success stories.

In this year's Design-Win Grand Prix 2009, 26 outstanding activities were nominated for awards.



Members of distributor who received last year's Best Partner award

## Strengthening Partnerships with Overseas Sales Partners

We are working with overseas sales partners to promote community-based sales activities.

### Partnerships in Europe and the United States

Each of our sales subsidiaries in Europe and the United States carries out direct sales, and also engages in sales activities together with all of the managers and sales personnel at our local sales distributors. Management-level distributor meetings once a year and regular quarterly meetings are held to confirm management policy and determine solutions to problems. Also, we hold regular meetings with sales personnel and implement activities to address business challenges. Through discussions and exchanges of diverse opinions, we are strengthening our partnerships.

### Partnerships in Asia

Our sales subsidiaries in Asia carry out sales activities in close cooperation with Japanese-affiliated local distributors moving into every part of Asia and with local companies. Japanese, European, and American subsidiaries locate their procurement and production sites here in "the world's production base." Rapidly expanding local companies are also pursuing ambitious development in this region. NEC Electronics is strengthening its partnerships with these sales partners to provide our Asian customers with adequate support.

# Community Involvement

The NEC Electronics Group desires to work together with employees to make meaningful contributions to society. Thus far, we have focused on developing work environments that make it easy for employees to participate in activities that help communities. We pledge to continue our active contributions to society as a good corporate citizen.

## Social Contribution Activities by NEC Electronics and Group Companies

### Basic social contribution activity policies

We will promote social contribution activities by encouraging employees to be aware of community issues and by supporting their efforts to be of service to communities.

- (1) As a semiconductor manufacturer, NEC Electronics is deeply involved in issues of global environmental conservation. We will contribute to society as a good corporate citizen by doing our part to aid in environmental efforts and other issues of importance to local communities where we do business.
- (2) The NEC Electronics Group will engage in activities that contribute to improving and projecting a corporate image that is appropriate for a global enterprise.
- (3) We will participate in activities promoted by the NEC Group to contribute to NEC's brand value.

### Social contribution activities by NEC Electronics and group companies

The employees of NEC Electronics and group companies concentrate on activities that contribute to local communities and protect the global environment and that are directly related to the production of semiconductor devices. Group companies also independently develop community-based initiatives and participate in NEC Group efforts to contribute to society.

## Volunteer Activity Support System

NEC Electronics is developing a system that facilitates employee participation in volunteer work, and makes information available on volunteer activities.

### Family-friendly leave

NEC Electronics implements a family-friendly leave system that enables employees to have fulfilling work and private lives. Employees can use the system to participate in volunteer work. Many reports have been received from employees about a variety of volunteer activities—for example, instructing a science class for children or helping to run a sports meet—that they were able to participate in through this system.

## Talking about CSR

### Part of being a good corporate citizen is helping to protect the environment

NPOs and other organizations hold regular environmental events and seminars in the Shiga and Fukui regions. By attending these events, we can exchange information and deepen relations with local communities. In Shiga, NEC Electronics employees spend their Wednesday lunchtimes doing eco-volunteer work such as cleaning up nearby

streets, raking up pine needles from Shiga's famous *Awazu no Seiran* Pine Tree Avenue, and clearing away trash from the shores of Lake Biwa. As part of our local communities, we must continue and expand our social contribution activities, for our own good and the good of the community.



Hiroyuki Tsuchiya, NEC Semiconductors Kansai

### Volunteers association

Employees who work at NEC Electronics headquarters and the company facility in Sagamihara plant have formed a Volunteers Association. Members meet twice a year to exchange information about the volunteer activities they are involved in. The association also e-mails information related to volunteer work to members.

### Public relations

NEC Electronics actively publicizes community support efforts we undertake. As a result, many of our activities are written up in trade papers.



Dempa Shimibun article (September 5, 2008)

## NEC Electronics' Community-based Activities

As a good corporate citizen, NEC Electronics develops activities that contribute to local communities.

### Electronic crafts workshop for elementary school children

The Kanagawa Science Challenge is an event that gives elementary and junior high school students hands-on experience with science. As part of the event, NEC Electronics held a lantern-making workshop utilizing an 8-bit microcomputer kit known as Iroha Hime. Employees acted as instructors to help the children make the lanterns.



Teaching children how to solder an electric circuit

### Cleanups

Employees and their families actively participate in beautification cleanups of the Tamagawa River near our headquarters and the Sagami-gawa River near the Sagamihara Plant, and also cleanups of streets employees use to commute to work, all of which are conducted on a regular basis.



Cleaning up commuter streets



### Collection campaigns

Foreign coins, used stamps, calendars, and other items are collected for donation to local communities, UNESCO, Unicef, and NPOs.



Donated calendars

## NEC Electronics' Forest Conservation Activities

Since July 2005, NEC Electronics has participated in activities by Kanagawa Prefecture to protect Kanagawa's water resources by creating riverhead forests. The Yadoriki riverhead forest in the Yadoriki area of the town of Matsuda, the location of our Semiconductor Forest, is one of a variety of activities we are engaged in.

### Forest thinning and pruning

Employees and their families tried their hand at forest thinning, which is of primary importance to forest preservation. All the participants got a taste of the hard work involved in protecting forests.



During a tree-thinning operation, an employee cuts down a tree with a saw



A first timer

### Woodcraft workshop

Participants made coasters, pen stands, bird calls, and other objects from the wood of the trees cut down in forest thinning operations.



Cute little ornaments made of wood

## Community Involvement by Group Companies

We are developing community-based activities in local communities in and outside Japan.

### NEC Electronics Europe

NEC Electronics Europe enthusiastically participated in a charity walk

organized by Welthungerhilfe (For each round (about 1 km) the active runners collected money from individual sponsors). The collected money was donated to the village of Kongoussi in Burkina Faso, Africa, which is currently suffering from severe famine.



NEC Electronics Europe employees gather at the start line

### NEC Semiconductors Kyushu Yamaguchi

Every year, NEC Semiconductors Kyushu Yamaguchi participates in a local flea market organized by the city of Nakatsu. The items up for sale are all donated by NEC Semiconductors Kyushu Yamaguchi employees and the collected money goes to a social welfare group in Nakatsu.



The tenth year of participation

## Partnership with NEC Corporation

As a member of the NEC Group, NEC Electronics actively cooperates in activities developed by NEC Corporation to contribute to communities.

### NEC Make Difference Drive

NEC Group employees around the world participate this program, which was inspired by the slogan "Start small by doing what you can." The program gives employees opportunities to enrich both their communities and themselves. Also, ongoing participation in volunteer work helps to raise employees' awareness of their responsibility as corporate citizens to contribute to the welfare of society.

This year, NEC Semiconductors Singapore and NEC Electronics Singapore participated in a mangrove cleanup and planting event in Singapore's Pasir Ris park.



Mangrove cleanup

### Rice paddy project

NEC Electronics employees participated in a project to revitalize lowland rice paddies that was launched by NEC Corporation in conjunction with the NPO Asaza Fund project to revitalize nature in Kasumigaura area.



Planting rice seedlings as part of the rice paddy project

## Talking about CSR

### Cleaning up the mangrove in Singapore's Pasir Ris park

Mangrove cleanup is NOT just about picking up litter! The aim was to educate NEC staff on marine debris issues and to encourage positive changes that will reduce debris in waterways and enhance aquatic environments. The mangrove plays a key role for the marine life in near-shore habitats.

NEC Semiconductors Singapore jointly organized the mangrove

cleanup with our four subsidiaries on June 5, 2009, and total of 41 employees participated. A lot of rubbish was found trapped among the roots and mud, and we collected a total of 31 bags of rubbish weighing 163 kg in just one short hour!

We were proud to see everyone in high spirits knowing that we had contributed our bit to saving the environment.



Simon Tok, NEC Semiconductors Singapore

# Respect for Human Rights and Equal Opportunity Practices

Through good communication with employees, NEC Electronics has developed a workplace environment that promotes mutual trust and enables individuals to fully demonstrate their capabilities.

## Respect for Human Rights

**We are working to maintain workplaces free of discrimination and harassment, where employees can fully demonstrate their capabilities.**

NEC Electronics has established the NEC Electronics Group Code of Conduct which prescribes respect for human rights and equal treatment of employees in matters of hiring, human resource development, worker treatment, and all other aspects of employment. The Code of Conduct prohibits discrimination on the basis of race, beliefs, gender, age, social position, family origin, nationality, ethnic group, religion, or the presence of physical or mental disabilities, and also prohibits sexual harassment. We make sure that all of our group companies are familiar with these Code of Conduct provisions. All group companies must also comply with the labor laws and regulations of their respective countries as well as provide education on human rights issues and conduct consciousness-raising activities.

Specifically, NEC Electronics has established a Human Rights Awareness Committee chaired by the human resources supervisor and attended by the manager of each division. The job of this committee is to discuss, approve, and implement action plans about human rights awareness. The committee also implements training tailored to each managerial level, as well as an annual web-based training session for all group employees. Awareness-raising activities are also carried out via an internal website dedicated to human rights issues and the employment of people with disabilities, and during Human Rights Week held each year.

We have also established an internal service with additional female staff for consultations on equal rights and other issues (the sexual harassment consultation service). Posters are put up on bulletin boards to inform employees of this service and what constitutes sexual harassment. In this way, we are working to create an environment that facilitates consultation and respond appropriately to the concerns of our employees.

In March last year, we participated in the United Nations Global Compact where we joined other businesses in redeclaring our intention, and the intention of all our group companies in Japan and throughout the world, to respect human rights and not practice discrimination in the workplace. We also pledged not to use unethical practices such as employing people by force or using child labor. We will continue to monitor the actions of all our group companies in this area so as to fulfill our pledge to maintain workplaces that are free from discrimination and harassment.

## Employment for Physically Challenged People

**We are developing barrier-free workplaces for the physically challenged.**

NEC Electronics is making concerted efforts to provide workplace environments that are easy for physically challenged employees to work in. We hold meetings between employees with disabilities and their managers to find out exactly what is needed, and implement requests to the best of our ability. Our hearing-impaired staff are able to receive sign-language translations of meetings streamed on our internal website. We also introduced contact-free cards for security gate entrance and renovated lavatory facilities in consideration of employees with upper or lower limb disabilities. (At the moment, 2.02% of our staff are physically challenged (figure current as of June 2008).)

## Balancing Work and Family Life

**We are implementing a progressive, family-friendly workplace program that seeks to enhance work and family life.**

In addition to supporting employees' efforts to fully demonstrate their capabilities, NEC Electronics implements many family-friendly measures (described below) that help employees balance work and family responsibilities so that they can experience satisfaction both at work and at home.

### Examples of family-friendly support systems

1. Family-friendly and medical care leave (FMCL)  
This system was set up to give employees the flexibility to take days off work for family-related reasons such as getting health checks (including taking family members), nursing a sick family member, attending a child's school event, doing volunteer work, or receiving medical treatment for infertility.
2. Family-friendly fund  
A lump-sum payment given to employees when they have a baby.
3. Financial aid for employees with both work and childcare or nursing care responsibilities
  - Employees can receive childcare and/or nursing care coupons providing financial assistance with fees related to employing home helpers or childcare professionals.
  - Employees can receive regular financial assistance when using municipal family support centers.
  - Employees can receive financial assistance with moving costs if the employee or the employee's parents have to move to help the employee fulfill both their work and family care responsibilities.

## Development of family-friendly support system

Fiscal year	System Implemented	
	Childcare System	Nursing Care System
1991	Childcare leave	Nursing care leave
1992	Reduced working hours (childcare)	Reduced working hours (nursing care)
	Medical care leave	
1998		Nursing care coupon system
1999	Childcare coupon system	
2001	Extension of reduced working hours (childcare) (3 years old, end of March → entrance into elementary school)	Extension of reduced working hours (nursing care) (3 years → until nursing care is no longer necessary)
	Work-at-home system	
2003	Family-friendly medical care leave (revision of medical care leave)	
2005	Extension of reduced working hours (to first grade, end of March in special circumstances)	
2006	<ul style="list-style-type: none"> <li>Period of childcare leave modified (until end of March after child reaches one year or until child reaches 18 months)</li> <li>Financial aid for use of family support centers-Childcare financial support system (financial aid for change of residence for the purpose of childcare)</li> <li>Establishment of a website to support employees returning to work after a leave of absence</li> </ul>	Removal of restrictions on number of nursing care leaves (leave is permissible per nursing care requirement)
2007	<ul style="list-style-type: none"> <li>Extension of reduced working hours (childcare) (to third grade, end of March in special circumstances)</li> <li>Extension of work-at-home hours and expansion of employees permitted to work at home</li> <li>Family-friendly medical care leave (medical fertility treatment added)</li> </ul>	Expansion of employees permitted to work at home
2008	<ul style="list-style-type: none"> <li>Financial aid to support use of family support centers (municipal childcare support services added)</li> <li>Extension of period to receive financial aid for use of family support centers (first grade, end of March → third grade, end of March)</li> </ul>	
2009	Introduction of re-employment system for employees who leave work for reasons of childcare, nursing care, or spouse's job transfer	

## Talking about CSR

### CSR in the global era

CSR may have a universal nature, but it's not always easy to apply CSR policies universally because the history, culture, and religion of each country and region must be taken into account. My job at NEC Electronics head office was to find out the situation of human rights at our overseas companies, while at the same time understanding the

limitations and contradictions in the various international codes of conduct to be applied. When I returned to NEC Electronics China, I decided to use my experience in Japan to develop CSR activities that suited the situation in China.



Huaxin Wang, Global HR Group, HR & General Affairs Division, NEC Electronics/  
Human Resources Division, NEC Electronics China

# Human Resource Development and Communication

NEC Electronics strives to create environments that give all employees a sense of commitment and the job skills they need to achieve self-fulfillment, and also to improve workplace environments through a variety of communication activities.

## Human Resource Development

We offer training programs and career support to help employees achieve self-fulfillment.

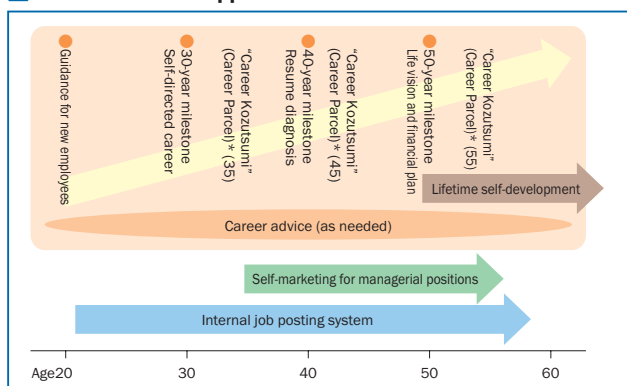
We have three different training program categories to develop our human resources. The first category includes *basic training*, in which our employees are taught the basic elements required to enhance customer orientation. The second is *management training*, and the third is *specialist training*. Through these training programs, our employees acquire the knowledge and skills they need to do a better job. The training programs are tailored to each employee's position and responsibilities. Employees are also encouraged to undertake personal development and seek self-fulfillment in their work.

We are departing from the traditional lifetime employment system premised on the mutual dependence of the company and its employees, to build a new company-employee relationship in which the company supports the individual's ongoing professional growth over the long term. To achieve this, we encourage employees to be innovative and to keep developing their talents and abilities, and make every effort to support them in achieving lofty goals.

### Human resource development curriculum



### Lifetime career support



## Communication

We communicate with employees and labor unions to improve workplace environments.

### Communication with employees

To ascertain management conditions and employee morale, we conduct a Management and Employee Morale Survey once a year in all group companies in Japan. In this survey, employees can frankly express their opinions on issues such as company policies, their workplace, management and their job. Workplace improvements and new measures are implemented based on survey results. The surveys promote understanding of the conditions in all group companies and enable us to apply cases of successful improvements to other companies.

### Communication with labor unions

NEC Electronics holds labor-management meetings twice a year with the NEC Electronics Workers' Union, to which our employees belong, to exchange frank opinions on management policies and business conditions. In addition, the Labor Affairs Committee and the Work and Life Balance Committee, whose members are representatives of both employees' and management, conduct diverse activities with regard to preventing long working hours, improving working conditions, and supporting caring for employees' children. These activities help to build stable labor-management relations.

Similar efforts are being undertaken by company management and workers' unions in all group companies in Japan. In group companies overseas, company management exchanges opinions on working conditions with workers' union representatives or employee representatives based on the laws and regulations in their respective countries.

\* "Career Kozutsumi" (Career Parcel)

This is our very own unique effort to encourage employees to think about their own career development plan. The company sends employees who have reached 35, 45, or 55 years old a parcel which includes a birthday card, an application form for a complimentary book recommended by the company, a list of training programs for employees with a discount coupon, and some brochures to inspire employees to think positively about their career development plan.

# Occupational Health and Safety

NEC Electronics recognizes that health is an irreplaceable asset and places high priority on ensuring the safety and health of our employees. This core principle underpins the focus on preventive safety and health measures implemented by the NEC Electronics Group.

## Occupational Health and Safety

**We are shifting from a conventional focus on safety to a focus on health.**

In recent years, the majority of our employees are office and engineering personnel. For this reason, we have made a major policy change from a conventional safety focus to a health focus in our health and safety activities. A variety of activities are carried out based on three key objectives: fostering mental health, safeguarding against overwork, and maintaining and improving health.

Specifically, to foster mental health we provide mental health care education in the form of seminars on self-care, awareness-raising seminars for supervisors, and a variety of training courses. We are expanding this education program to make it more comprehensive. With regard to safeguards against overwork, we cooperate with the labor union via the Labor Affairs Committee; if an employee is working an excessive amount of overtime, we talk in depth with both the employee and the employee's supervisor. To promote health maintenance and improvement, we closely follow up on the regular medical checkups provided by the company.

We comply with a government policy begun in April 2008 that requires all employees over the age of 40 to undergo a wide-ranging medical examination once a year and receive mandatory guidance in accordance with their diagnostic outcomes. We also offer specified medical examinations and guidance for employees 30 and 35 years of age in order to take early measures against metabolic syndrome.

## Mental Health Management

**NEC Electronics provides preventive, early-detection, and back-to-work mental health care support services.**

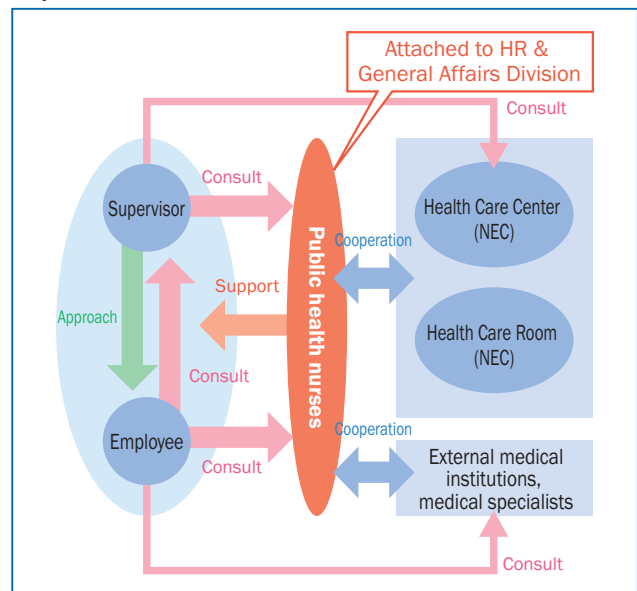
We have public health nurses attached to the HR & General Affairs Division in cooperation with NEC Corporation's Health Care Center. The nurses have been providing dedicated mental health consultation services to employees and their supervisors in cooperation with

industrial physicians and medical specialists.

The services include regular professional instruction in mental health for all managers to heighten their awareness of mental health issues. This is because managers are the most likely people to spot potential problems in employees under their supervision and approach the individuals concerned. In addition, the nurses have also started up a special website for employees called "News from the Nurses" that provides healthcare information with a focus on facilitating self-care. The nurses also care for employees who take leaves of absence from work due to mental health reasons, and look after them when they return to work.

We will continue to develop even more closely focused measures that enable early detection and treatment of mental health problems and also promote prevention activities.

## ■ Consultation and support system for mental health problems



## Talking about CSR

### Ongoing mental and physical support for victims of the Sichuan earthquake

It has been more than a year since the great earthquake hit Sichuan Province in China. Soon after the disaster happened, we immediately launched a series of charity programs to help the victims.

Apart from monetary donations, we also set up a mental care group to help children in elementary schools. Volunteers from different business units worked together in providing spiritual support to those who had just suffered

the biggest shock in their young lives. This kind of mental care support will be a long-term and individualized program that will last until the children are grown up.

We believe that spiritual need is of the same importance of physical demand. Our ongoing efforts will bring people hope and warmth through activities that extend the contribution of NEC's social responsibility program in all possible ways.



Yuanxing Kuang, NEC Electronics China



# IV

## Efforts to preserve the global environment

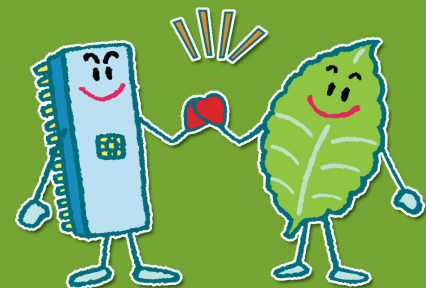
### NEC Electronics Environmental Policy

We will contribute to conservation of the global environment in the course of our activities within the semiconductor industry.

#### Action Guideline

1. We will incorporate environmental considerations into all stages of our product life cycle, including development, procurement, production, sale, use and disposal.
2. We will strive to prevent pollution as well as minimize impacts on the environment caused by chemical substances.
3. Our environmental management efforts will involve compliance with all environmental laws and regulations and other demands to which we have given our consent as well as establishment of own voluntary environmental standards.
4. We will educate all employees in environmental management and foster awareness of environment, safety and health.
5. We will regularly review our environmental management system and continually improve environmental activities.

<b>Environmental Management System</b> .....	<b>31</b>
Green-product activities, Eco-factory activities and Eco-communication activities .....	31
Environmental Management System .....	31
Fiscal 2009 Performance and Mid-term Plan.....	32
Environmental Impact of NEC Electronics Group Business Activities .....	33
Environmental Accounting.....	34
Acquisition of ISO 14001 Certification .....	35
Environmental Management Audits .....	36
<b>Green-product activities</b> .....	<b>37</b>
Green Product Creation .....	37
Actions Involved in Creating Green Products .....	37
Compliance with Environmental Laws.....	38
LCA-Based Eco-conscious Product Design.....	38
<b>Eco-factory activities</b> .....	<b>39</b>
Efficient Use of Energy.....	39
Greenhouse Gas Emission Reduction.....	41
Strategies to Regulate Chemical Substances in Production Processes .....	42
Management of Banned Chemical Substances .....	42
Waste Reduction and Recycling.....	43
Environmental Risk Management .....	44
<b>Eco-communication activities</b> .....	<b>45</b>
Communication Activities.....	45
Educational and Awareness-raising Activities.....	46
<b>Milestones in Environmental Activities</b> .....	<b>47</b>



# Environmental Management System

NEC Electronics is creating and implementing an environmental management system in conformity with ISO 14001 standards, and is working in accordance with mid-term and long-term plans to reduce our environmental impact and contribute to preserving the global environment during our activities in the semiconductor industry.

## Green-product activities, Eco-factory activities and Eco-communication activities

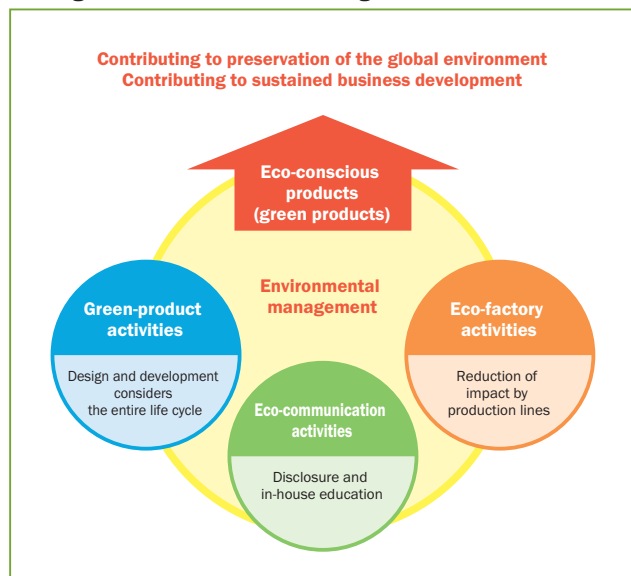
Promoting environmental management revolves around three activities involving all our employees.

The NEC Electronics Group recognizes that global environmental issues are directly linked to continued development of its business. We intend to contribute to preserving the global environment during all of our semiconductor manufacturing activities.

- (1) We produce green-products by incorporating environmental considerations and hazardous substance management into the entire product life cycle right from the design and development stage.
- (2) In our eco-factories, we are working to reduce the impact of production processes on the environment by reducing greenhouse gas emissions that contribute to global warming and by phasing out hazardous chemical substances used for manufacturing.
- (3) The NEC Electronics Group promotes eco-communication by offering environmental education programs that raise employee awareness of environmental issues, and by making information on our eco activities widely available to the public.

We have built an environmental management system to serve as the infrastructure for promoting these three pillars of environmental activities undertaken in all business areas with the full participation of all our employees.

### Diagram of environmental management



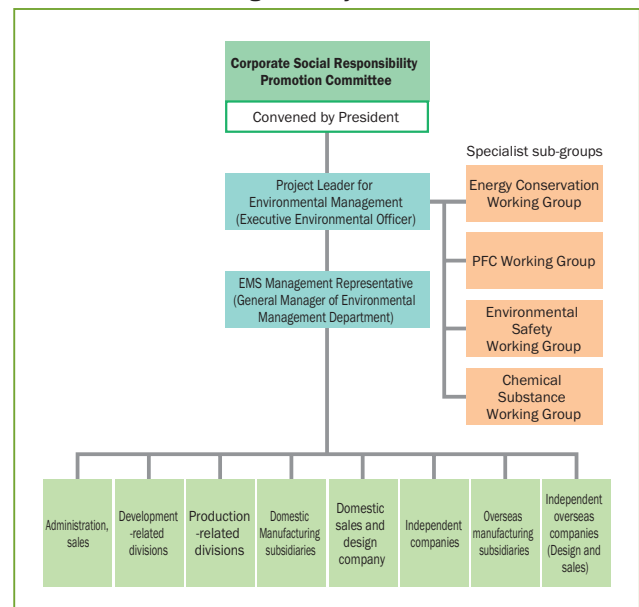
## Environmental Management System

All employees of the NEC Electronics Group work together to develop and promote our environmental activities.

NEC Electronics has established a Corporate Social Responsibility Promotion Committee convened by the president that is responsible for considering environmental concerns related to all group companies. Decisions are implemented at the group level by the Executive Environmental Officer and the General Manager of the Environmental Management Division. When dealing with matters of high specialization or prime importance, specialist sub-groups under the direction of the Executive Environmental Officer are set up to assist in considering the issues and drafting strategies to deal with them. The Environment Conference consists of members from both NEC Electronics and its group companies.

NEC Electronics also operates a separate internal environmental management system that conforms to ISO 14001 requirements, which is headed by the Executive Environmental Officer.

### Environmental Management System





## Fiscal 2009 Performance and Mid-term Plan

We carefully determine priorities and set targets for systematic environmental activities.

### Fiscal 2009 performance results

Green-product and eco-factory activities were central to our efforts in fiscal 2009.

#### 1. Green-product activities

To reduce hazardous substances, we will continue to promote the use of substitutes with reference to trends in other countries.

#### 2. Eco-factory activities

We achieved our targets for reducing the emission of PFCs and for increasing the rate of industrial waste recycling, but we only reduced the amount of CO<sub>2</sub> emissions to 66.5% of the fiscal 1991 level per real production unit, failing to achieve our target of 66%. To reduce specified chlorofluorocarbons used as refrigerants, we substituted different refrigerants at most of our factories in Japan in fiscal 2009, but we did not make the substitution at the Nishiki plant in Kumamoto.

### Mid-term plan

We reviewed the environmental activity tasks and partially revised the mid-term plan. We achieved the targets we had in place up through last year regarding hazardous materials reduction, technology to enable substitutes, and keeping the industrial waste recycling rate at 99% or more. These activities will continue on their own impetus, and therefore do not need to be included as mid-term plan tasks.

### Performance results in fiscal 2009

Category	Sub-category	Task	Reference year	FY 2009 target	FY 2009 result	Rating
Green-product activities	Reduction of hazardous substances	Technology to enable substitutes	-	Keep informed of trends	Keep informed of trends	-
Eco-factory activities	Prevention of global warming	CO <sub>2</sub> emissions (per real production unit <sup>*1</sup> )	FY 1991	66%	66.5%	Not achieved
		PFC emissions (converted to GWP)	1995	99%	84%	Achieved
	Prevention of ozone-layer destruction	Reduction of specified chlorofluorocarbons (chiller refrigerants)	-	94% substitutes	88% substitutes	Not achieved
	Resource recycling	Rate of industrial waste recycling	-	99% or more	99.8%	Achieved

\*1 One real production unit equals the amount of CO<sub>2</sub> emissions / (output / the Bank of Japan's Domestic Corporate Goods Price Index figure for electrical machinery and equipment).  
The amount of CO<sub>2</sub> emissions is the total of emissions from our business facilities and factories in Japan.

### Mid-term plan and targets for fiscal 2010

Task	Mid-term target	FY 2010 target
Prevention of global warming	CO <sub>2</sub> emissions (compared with FY 1991)	65% reduction in emissions per real production unit by FY 2011
	PFC emissions (compared with 1995)	90% in GWP equivalent by 2010
Prevention of ozone-layer destruction	Specified chlorofluorocarbons (chiller refrigerants)	Phased out by FY 2011
		76% <sup>*2</sup>
		60% <sup>*3</sup>
		94% substitutes <sup>*4</sup>

\*2 Emissions in fiscal 2010 compared with fiscal 1991 performance level of 100%.

\*3 Emissions in 2009 compared with 1995 performance level of 100%.

\*4 Progress in phasing out and replacing chillers that use specified CFCs owned by the company at the time the mid-term plan was drawn up.

## Environmental Impact of NEC Electronics Group Business Activities

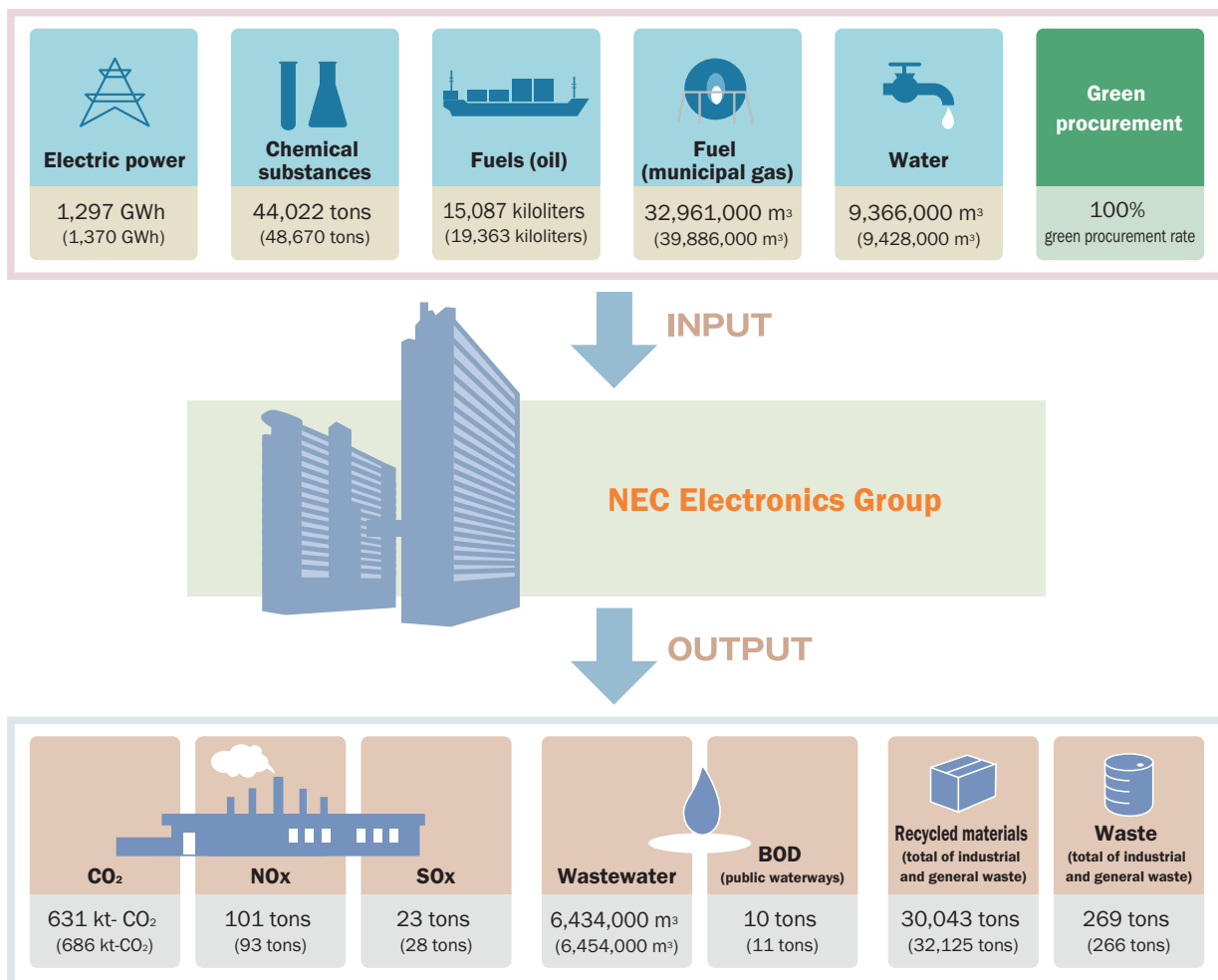
### We identify and assess inputs and outputs to systematically reduce our environmental impact.

Production activities by the NEC Electronics Group involve input of electricity, chemical substances, fuels, and water and output of exhaust gases, wastewater, and solid waste in addition to products.

By quantitatively grasping the overall picture of input and output flow, it becomes possible to determine the most appropriate measures for reducing the impact of production activities on the environment and to devise an efficient system for implementing those measures. Also, should the reduction of impact itself prove difficult, we explore alternative solutions. To achieve these goals, we constantly seek to identify and assess relevant environmental tasks.

Precise responses to environmental issues enable us to carry out systematic reduction activities. The NEC Electronics Group aims to reduce the environmental impact of production activities by more efficiently using limited resources while also working to streamline product distribution.

### Environmental implications of NEC Electronics Group business activities



Figures indicate performance in fiscal 2009 by all NEC Electronics Group companies in Japan. (Fiscal 2008 results are indicated in parentheses.)

## Environmental Accounting

### We investigate the costs and benefits of our environmental activities.

The NEC Electronics Group has formulated its own internal environmental accounting guidelines in conformity with the 2005 edition of the Ministry of the Environment's "Environmental Accounting Guidelines," and practices consolidated accounting that includes

overseas manufacturing subsidiaries.

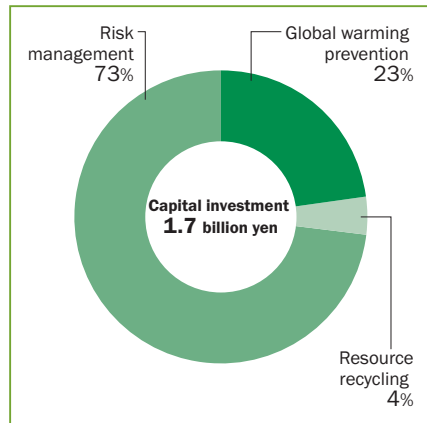
Due to the nature of the semiconductor business and its potential for substantial impact on the environment, it is essential to clarify the validity of environmental preservation costs and evaluate the investments and resulting benefits in order to balance ecological and business interests.

In fiscal 2009, capital investment in risk management increased significantly due to the installation of equipment required for factory expansion.

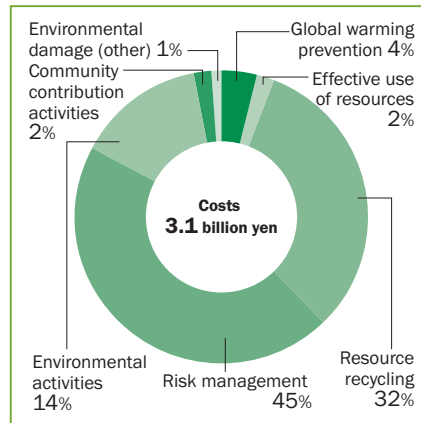
### Environmental accounting results for fiscal 2009

Type	Task	Content	Capital investment (millions of yen)	Cost (millions of yen)	Benefit	
					Economic benefit (millions of yen)	Environmental impact reduction
Business area	Global warming prevention	Global warming prevention measures	389.8	118.9	171.4	163,406t-CO <sub>2</sub>
	Effective use of resources	Measures for reduced consumption of chemical substances, materials, water, etc.	0.0	76.8	319.6	21,667t
	Resource recycling	Measures for recycling and waste generation control, etc.	57.8	985.0	538.8	4,886t
	Risk management	Measures to prevent pollution, comply with laws/regulations, develop chemical substance and waste management systems, etc.	1,237.4	1,377.2	1.2	-
Upstream and downstream	Eco-conscious products	Product and production process assessments, etc.	0.0	9.7	-	-
Environmental management	Environmental activities	Personnel costs, employee training expenses	0.4	437.0	-	-
R&D		Development of technologies for reduction of environmental impact	0.0	0.0	-	-
Social activities		Social contributions, information disclosure, tree-planting campaigns	0.0	55.8	-	-
Environmental damage (other)		Levies for environmental pollution	-	29.0	-	-
Total			1,685.3	3,089.5	1,031.0	-

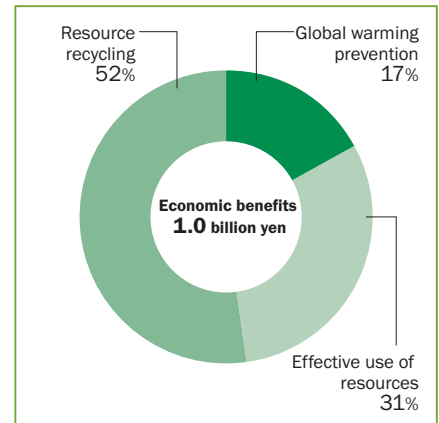
### Capital investments



### Costs



### Economic benefits



## Acquisition of ISO 14001 Certification

All group companies have acquired certification and are properly implementing environmental management systems.

In September 2003, NEC Electronics received ISO 14001 certification separately from NEC Corporation. Currently, NEC Fabserve\* and NEC Micro Systems, organizations associated with NEC Electronics, implement environmental management systems that were integrated with the system at NEC Electronics.

All manufacturing subsidiaries in and outside Japan became ISO 14001 certified by March 2004. All Japanese and overseas design and sales subsidiaries acquired ISO 14001 certification by June 2005, except companies with only a small number of employees.

In fiscal 2010, we intend to integrate the certification held by NEC Electronics and its manufacturing subsidiaries in Japan.

\* NEC Fabserve stopped conducting business in December 2008.



Certificates of ISO 14001 Certification

## Acquisition of ISO 14001 Certification

	Registration No.	Certification body	Date certified
NEC Electronics Corporation <sup>*1</sup>	JQA-EM3385	JQA	September 19, 2003
Japanese Manufacturing Companies			
NEC Electronics Corporation <sup>*2</sup>	JQA-EM3490	JQA	November 1, 2003
Overseas Manufacturing Companies			
Shougang NEC Electronics Co., Ltd. <sup>*3</sup>	A16067	UL	March 19, 2007
NEC Electronics America, Inc. (Roseville Plant)	A12645	UL	March 3, 2004
NEC Semiconductors (Malaysia) Sdn. Bhd.	N00410001	SIRIM	April 3, 1998
NEC Semiconductors Singapore Pte. Ltd.	2000-0096	PSB	May 26, 2000
Overseas Sales and Design Companies			
NEC Electronics America, Inc.	A13657	UL	April 18, 2005
NEC Electronics (Europe) GmbH <sup>*4</sup>	421504 UM	DQS	June 16, 2008
NEC Electronics Hong Kong, Ltd.	CC2889	HKQAA	January 31, 2005
NEC Electronics Taiwan, Ltd.	TW04/00558EM	SGS	October 14, 2004
NEC Electronics Singapore Pte. Ltd.	TW04/00587EM	SGS	December 2, 2004
NEC Electronics (China) Co., Ltd. <sup>*5</sup>	A16808	UL	February 21, 2008
NEC Electronics Shanghai	A16950	UL	March 2, 2008
Other Group Companies			
Nippon Electroluminescent Light Co., Ltd.	EC04J0445	JACO	February 11, 2005
Kinki Bunseki Center, Ltd.	JQA-EM0185	JQA	July 10, 1998

### Certification bodies

JQA: Japan Quality Assurance Organization

JACO: Japan Audit and Certification Organization for Environment and Quality

UL: Underwriters Laboratories Inc.

SIRIM: Standards and Industrial Research Institute of Malaysia

SGS: Société Générale de Surveillance

PSB: Singapore Productivity and Standards Board

DQS: Deutsche Gesellschaft zur Zertifizierung von Managementsystemen

HKQAA: Hong Kong Quality Assurance Agency

\*1 Separated from NEC Corporation (JQA-E-90066). Scope of registration: Tamagawa, Sagamiyara, Nagoya sales office, Osaka sales office, NEC Fabserve, Ltd. and NEC Micro Systems., Ltd. (headquarters, Kansai, Chubu, Kyushu, Hokkaido, Yamagata)

\*2 Integrated certification for the following Japanese manufacturing subsidiaries:

NEC Semiconductors Kansai, Ltd. (Shiga plant and headquarters, Fukui plant, NEC Nanoelectronics Research Laboratories),

NEC Semiconductors Kyushu Yamaguchi, Ltd. (Kawashiri plant in Kumamoto and headquarters, Yamaguchi plant, Fukuoka plant, Oita plant, Nishiki plant in Kumamoto),

NEC Semiconductors Yamagata, Ltd. (Tsuruoka plant and headquarters, East Tsuruoka plant)

\*3 The certification body has been changed. Certification was formerly acquired on February 12, 2004.

\*4 The certification body has been changed. Certification was formerly acquired on June 30, 2005.

\*5 The certification body has been changed. Certification was formerly acquired on February 18, 2005.

## Environmental Management Audits

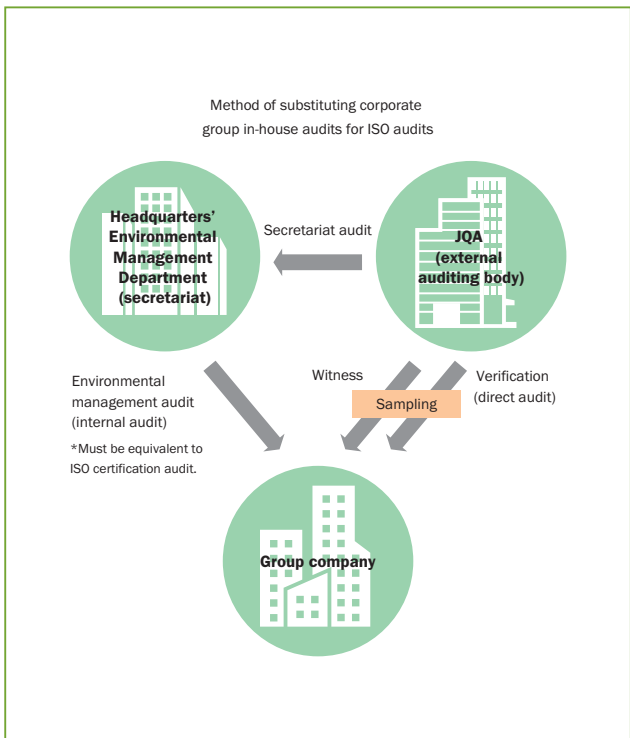
**We use environmental management audits to continuously improve our risk management and environmental efforts.**

The NEC Electronics Group conducts environmental management audits as an alternative to ISO certification audits by external auditing bodies. In fiscal 2009, we conducted a series of environmental management audits from June through September to evaluate environmental impact reduction, risk management, community contributions, and collective environmental management activities for ISO conformity in six Japanese manufacturing companies. We determined that the environmental management systems of all of the companies conform to the ISO 14001:2004 edition of the standard, meet environmental performance standards, and that all companies are practicing sound risk management.

The Japan Quality Assurance Organization (an external inspection organization) has again approved the high quality audits we substitute for the ISO 14001 environmental management standards audit as an appropriate auditing system.

All of our auditors have completed an environmental auditors training course approved by CEAR or a former environmental auditor training course accredited by the JAB (Japan Accreditation Board for Conformity Assessment). We have 22 qualified auditors. Of these, four are qualified as CEAR-registered lead auditors and 9 as CEAR-registered auditors (as of March 31, 2009).

## Substitute audits



Opening meeting



An outdoor worksite audit



An audit of documents



An audit in the clean room

## Talking about ecology

**We are expanding environmental management into our everyday business.**

We are contributing to reducing our company's impact on the environment through the participation of all employees in environmental activities.

While carrying out business activities to manufacture LSI circuits, each group thinks about the relationship of its

business with the environment, clarifies that relationship for understanding, and then carries out environmental activities in which all employees participate to improve our environmental performance.



Shingo Tokunaga, NEC Semiconductors Kyushu Yamaguchi, Ltd.



# Green-product activities

NEC Electronics is committed to providing green products that are safe, harmless, and environmentally friendly while also actively releasing environmental data related to our products. Our green products contribute to our customers' environmental solutions.

## Green Product Creation

At NEC Electronics, we create green products by applying environmental considerations at every stage from product procurement to production, use by customers, and, finally, disposal.

Electrical and electronic devices used by consumers consist of a variety of materials and parts. To ensure that these devices are safe and have minimal impact on the environment, it is essential that environmental considerations be applied starting at the raw material and part procurement stage. As a components manufacturer, we have gradually shifted from conventional to environmentally friendly business activities. Our environmental consciousness continues to grow; we now view the environmental friendliness of the products we manufacture as an element of product quality and make it a primary management objective at NEC Electronics.

Specifically, we strictly comply with the green procurement requirements of our customers, who manufacture electrical and electronic devices. At the same time, we ensure that banned substances are not contained in the materials and parts we purchase by requesting that our purchasing partners follow the green procurement guidelines we have formulated to govern our own voluntary efforts. We also audit our purchasing partners on a regular basis.

In terms of the product life cycle, particularly from the standpoint of environmental impact reduction during use, we contribute to the production of final products that consume less power by means such as using advanced process technologies to create system LSIs that integrate multiple functions on a single chip and designing for low power consumption. We are also committed to disclosing information on the chemical substances contained in our products to ensure that consumers and equipment manufacturers can use our semiconductor devices with confidence.

## Actions Involved in Creating Green Products

During each phase of manufacturing process development, product development, and manufacturing, we take action to ensure that our products are environmentally friendly.

### Efforts during development

To create green products, it is essential that the products consume little energy, use few resources, and do not contain hazardous materials. It is also important to ensure that the manufacturing process has little impact on the environment. Therefore, we are striving to develop both products and manufacturing processes that are environmentally friendly.

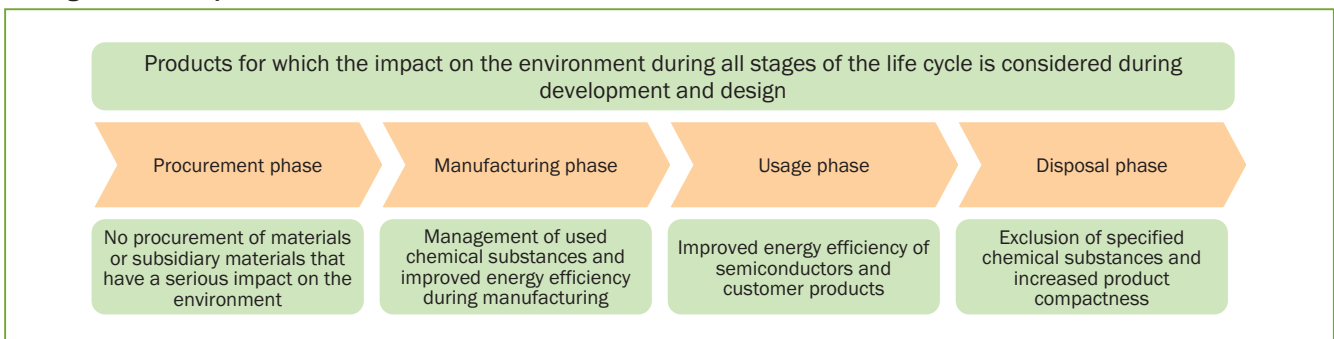
### Efforts during manufacturing

Internationally speaking, laws and regulations related to the inclusion of specified hazardous materials in products are becoming more and more widespread. To comply with these laws and regulations, we are managing the substances included in materials we order and the chemical substances at our factories.

### Items related to environmental friendliness

	During development		During manufacturing	
	Manufacturing process assessment	Product assessment	Green procurement	Management of chemical substances included in products at factories
Energy consumed during manufacturing	●			
Chemical substances used during manufacturing	●		●	
Energy efficiency of semiconductors		●		
Compactness of semiconductors		●		
Energy efficiency of customer products		●		
Chemical substances included in products	●	●	●	●

### Diagram of Green-product Activities



## Compliance with Environmental Laws

**We make sure that our products comply with environmental laws and provide the information necessary to do so.**

Our semiconductors are included in a wide variety of products including automobiles, household appliances, mobile devices, IT devices, and communications devices, which are used in countries all over the world. Therefore, we obtain all the information necessary to comply with environmental laws and put that information to use to achieve compliance.

### We also comply with major overseas environmental laws.

The thresholds above which the inclusion of substances is banned are established by the European RoHS directive and ELV directive. We make sure that these thresholds are not exceeded by obtaining analysis data and reports showing that banned substances are not included in semiconductor materials from the partners we purchase them from, and we also analyze our products in-house. The Administrative Measure on the Control of Pollution Caused by Electronic Information Products (the China RoHS) also requires that products including banned substances be labeled. Although it is difficult to directly label semiconductors, which are small components, we provide information about the substances included in each type of product at the website below.

### List of products complying with the China RoHS:

**URL** [http://www.necel.com/pb\\_free/en/china\\_rohs\\_list.html](http://www.necel.com/pb_free/en/china_rohs_list.html)

Regarding the European REACH regulation, because our finished semiconductors (articles) are intentionally designed not to release chemicals, we do not register any substances. In addition, we obtain information about any included substances of very high concern from our supply chain and supply the information to our customers.

## LCA-Based Eco-conscious Product Design

**We use the results of LCA in design and manufacturing processes.**

LCA (life cycle assessment) is a method of evaluating the environmental impact of a product over the entire life cycle from excavation of raw materials for materials manufacturing, to product manufacturing, transport, use, and, ultimately, disposal.

## Talking about ecology

**We aim to simultaneously improve the functionality and environmental friendliness of our products.**

An LSI chip might only be a few millimeters wide, but the ability of such chips to reduce the energy and resources consumed by the automobiles and other electronic devices in which they are incorporated is enormous. During product design, we constantly strive to improve the energy efficiency and integration density while achieving the advanced

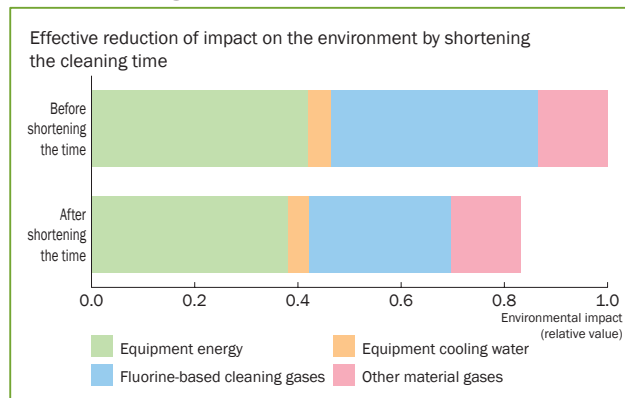
functionality and performance that our customers demand of our semiconductors by imagining how they will be used in the customer's application. Functionality and environmental friendliness might seem like opposing goals, but we are using all the expertise we have to achieve both.



Makoto Inoue, NEC Micro Systems, Ltd.

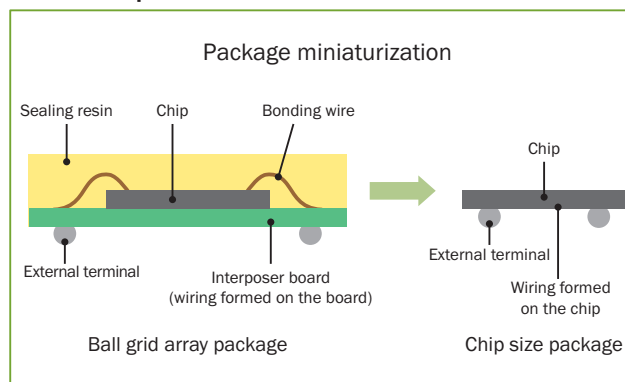
We use LCA analysis tools to evaluate our semiconductors and apply the analysis results to product development and design because we want to provide our customers with products that have little impact on the environment.

### Example of Simulating the Reduction of Environmental Impact Through Process Improvement



The above example shows that reducing the cleaning time during the CVD process by 32% reduces the environmental impact of each wafer by 17%.

### Example of Reducing Environmental Impact by Changing Product Specifications



Miniaturizing the package means that materials such as sealing resin, bonding wire, and interposer boards do not have to be used, which reduces the environmental impact by 23%.

# Eco-factory activities

We promote efforts to reduce the environmental impact of our factories through efficient use of resources, reduction of greenhouse gas emissions, reduction and improved management of chemical substances, reduction and recycling of industrial waste, and implementation of environmental risk management.

## Efficient Use of Energy

We promote energy-saving activities in our factories.

The NEC Electronics Group is currently working to reduce the amount of energy it consumes in Japan to 65% or less of the fiscal 1991 level in terms of real production units by fiscal 2011. So far, we have actively participated in efforts by the semiconductor industry to use energy efficiently by working to eliminate wasteful use of energy and re-examining our manufacturing processes. We also work closely with production facility and incidental facility industries to promote energy conservation activities.

### Energy-conservation diagnosis

To verify the appropriateness of our energy-saving activities thus far and uncover new energy-saving measures, group companies have been undergoing energy-conservation diagnoses by experts from outside the company since fiscal 2007.

Energy saving measures are increasingly being implemented throughout the NEC Electronics Group. In fiscal 2009, we were struck by an unprecedented semiconductor recession, but energy saving activities are directly related to cost reduction, and activities such as planned manufacturing equipment shut downs helped us to prevent losses and set us on the path to returned profitability.

### Saving energy at existing lines

We have also reduced the energy used by existing semiconductor manufacturing lines by taking steps such as turning off idle equipment, using fan and pump inverters, optimizing the time, methods, and settings for air conditioning, and turning off unnecessary equipment such as fans and ventilators.

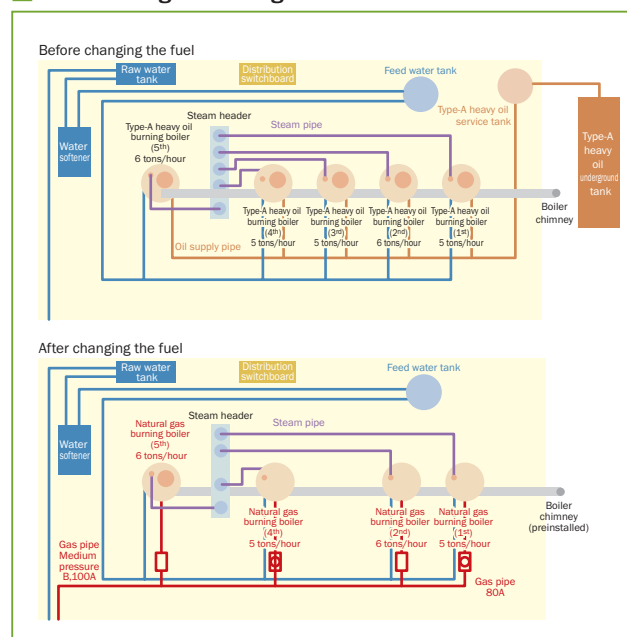
### Examples of ways we have saved energy at existing lines:

- (1) Using inverters (for fans and pumps)
- (2) Optimizing the time, methods, and settings for air conditioning (by changing the reheating temperature, extending the time during which there is no air conditioning at night, and reusing extra clean room air)
- (3) Turning off unnecessary equipment (such as fans and ventilators)  
Turning off air circulation devices (such as air conditioners)  
Turning off local coolers (such as fan coil units)  
Turning off exhaust fans and supply fans
- (4) Improving facilities and changing methods (insulation and humidification)  
Changing the operation of hot water and humidification boilers  
Minimizing the operation of equipment by controlling the deionized air and water used in the plant
- (5) Reducing power consumption by upgrading to highly efficient transformers

### Reducing CO<sub>2</sub> emissions by changing the boiler fuel

At the NEC Semiconductors Kansai plant in Shiga, the amount of CO<sub>2</sub> emitted per unit of heat has been reduced by improving the existing boilers so that they can use natural gas as fuel instead of heavy oil. Eliminating the use of heavy oil at the plant also reduced the amount of emitted SO<sub>x</sub> to zero.

### Boiler arrangement diagrams



### Upgrade of chillers

The NEC Electronics Group plans to upgrade all factory chillers that contain specified CFCs. Besides using these ozone-depleting substances as refrigerants, conventional chillers are outdated and thus are unsatisfactory in terms of energy efficiency. Upgrading is anticipated to result in 20% or more improvement in energy efficiency per unit. This will help prevent depletion of the ozone layer while also contributing to energy conservation. Upgrading in group companies in Japan is almost complete.

### Improving efficiency of newer manufacturing lines

Recently, a mini-environment system was employed for a newly installed semiconductor manufacturing line. The system maintains a high level of cleanliness within a limited area of the clean room where products are handled, while lowering the cleanliness level of other areas of the clean room to increase energy efficiency.

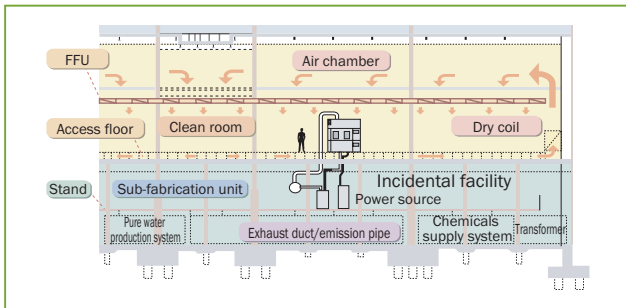
This system, combined with effective utilization of waste heat and outside air, helped cut energy consumption by 20% or more compared to a conventional system. The technology is also employed for the 8-inch line in the Shiga plant at NEC Semiconductors Kansai and the 300-mm line at NEC Semiconductors Yamagata. We also incorporate energy-saving considerations at the design stage. On the extended 8-inch line at NEC Semiconductors Kansai, which started up in fiscal 2009, we installed the most efficient machinery and equipment available.

### Some of the energy-saving measures implemented by new manufacturing lines

Introduction of high-efficiency systems and equipment

- (1) Large clean room and mini-environment system
- (2) Use of the latest energy-saving-type manufacturing equipment
- (3) Use of the latest model oilless vacuum pumps

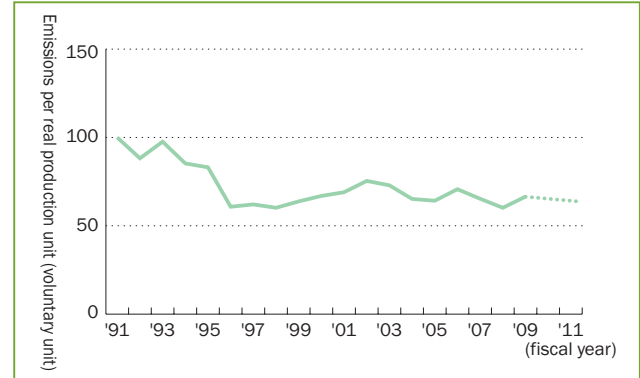
### Schematic diagram of a new manufacturing line



### Fluctuation in CO<sub>2</sub> emissions

In fiscal 2009, we implemented measures to save an equivalent of approximately 18,000 tons of energy and consolidated some of our old production lines. In addition, as a result of shutting down all idle equipment, we reduced the emitted CO<sub>2</sub> by 55,000 tons compared to the previous year, but the emissions per real production unit worsened by 6.3 points due to decreased sales.

### Fluctuation in CO<sub>2</sub> emissions per real production unit



\* Until fiscal 2002, we used the CO<sub>2</sub> conversion factor specified by Japan's Ministry of the Environment. Since fiscal 2003, we have used a fixed value (0.4t-CO<sub>2</sub>/MWh) to evaluate activity results.

### Compliance with obligations of transporters established by the revised Law concerning the Rational Use of Energy

In fiscal 2009, the NEC Electronics Group transported a total of 13.77 million ton kilometers of goods. This year, we were again able to verify that no company in the NEC Electronics Group qualified as a specified transporter of over 30 million ton kilometers under the revised Law concerning the Rational Use of Energy.

Based on the obligations of transporters established by the law, the NEC Electronics Group promotes reduction of energy consumed for transport with the support of NEC Logistics, a distribution management company.

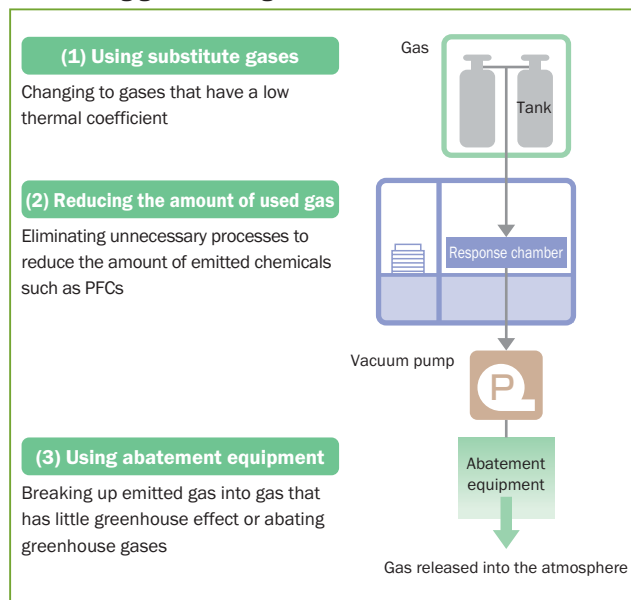
## Greenhouse Gas Emission Reduction

**We put measures to reduce greenhouse gas emissions into effect and reached our reduction goal sooner than expected.**

Greenhouse gases used by the NEC Electronics Group consist primarily of perfluorocarbon (PFC) gases used for cleaning reaction chambers used in the semiconductor manufacturing process. Reducing PFC emissions is an urgent issue because of its long atmospheric life and high global warming potential, which is 6,000 to 12,000 times that of CO<sub>2</sub>.

The methods for reducing the greenhouse effect of PFC gases include the following three: changing to types of gas that have little GWP, reducing the amount of PFC gases used during the manufacturing process, and using abatement equipment to break up PFC gases. By using a combination of all these methods, we have developed technology that is expected to reduce the amount of PFC gases we emit to 90% of the 1995 level or less by 2010.

### Reducing greenhouse gas emissions

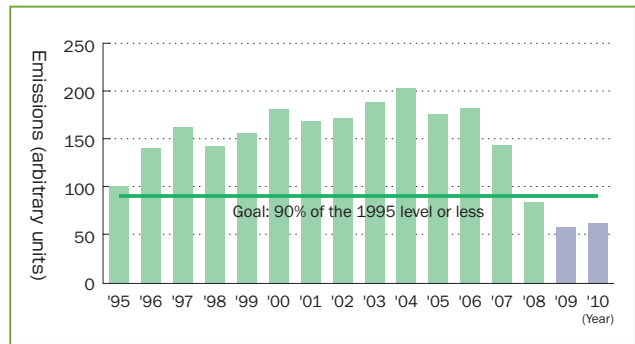


In 2008, by accelerating implementation of emission reduction measures such as the use of substitute gases and introduction of gas abatement equipment\* together with increased optimization of gas usage conditions, we were successful in reducing emissions by 40% compared to the previous year, which is 84% of the amount emitted in 1995 and means we reached our goal two years earlier than expected.

In the future, production volumes will no doubt rise. However, we will strive to reduce greenhouse gases even more by introducing various technologies in our volume-production factories for optimization of gas usage conditions and use of substitute gases, and by introducing abatement equipment as necessary.

\* We are introducing combustion-based PFC abatement equipment with the support of the New Energy and Industrial Technology Development Organization (NEDO), an independent administrative agency. In addition to the six PFC abatement units introduced in 2007, seven were introduced at the NEC Semiconductors Kyushu Yamaguchi plant in Kawashiri, Kumamoto, and at the NEC Semiconductors Kansai plant in Shiga, and these will start up in 2009.

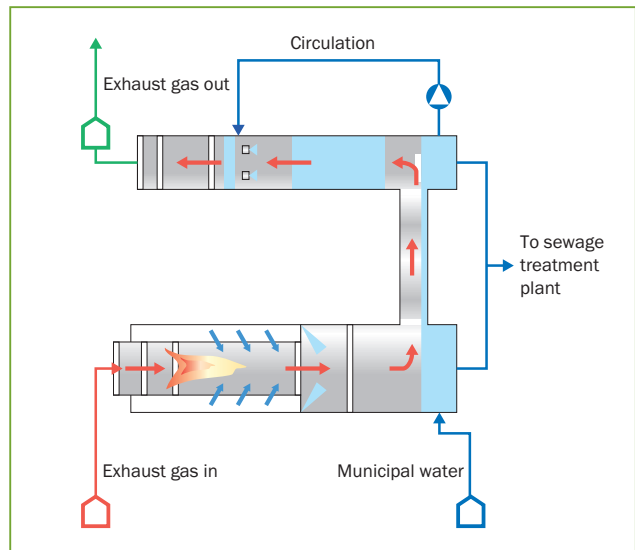
### Fluctuation in greenhouse gas emissions and projected levels



### Appearance of example PFC abatement equipment



### Example configuration of PFC abatement equipment (combustion based)





## Strategies to Regulate Chemical Substances in Production Processes

**Comprehensive data on usage conditions is applied to promote substitution and reduction of chemical substances.**

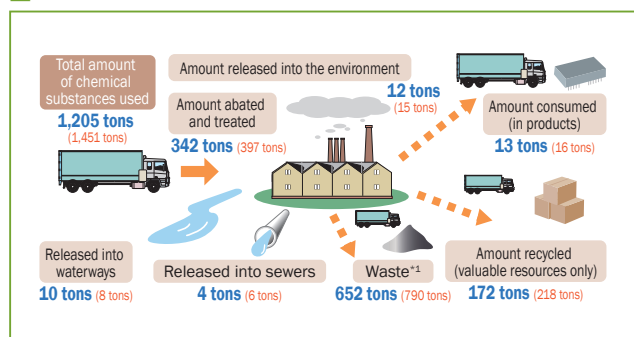
The chemical substance database built by the NEC Electronics Group contains a wide range of information concerning green procurement as well as laws and regulations. We refer to this database when conducting assessments. This makes it possible to identify the total amount of chemical substances in use and manage chemical substances from the viewpoint of toxicity, which serves as the foundation for R&D activities intended to create green products and eco-factories. In 1998, NEC Electronics joined a pilot PRTR scheme, under which we provide information required by law (such as reporting the use of chemical substances in amounts of five tons or more per year until March 2003, or one ton or more per year from April 2003). We also perform more precise chemical input/output numerical control for risk management. In addition, we are strengthening management of volatile organic compounds (VOC), which we now manage in the same way as PRTR-targeted substances.

In response to amendments to PRTR laws that will be enforced starting in April of 2010, the NEC Electronics Group will start examining chemical substances that have been added, prepare to comply with the amended laws, and strengthen its internal management.

Besides reporting, we also analyze the data and relay feedback to enhance efforts to introduce substitutes for and minimize the use of hazardous chemical substances.

The progress of chemical substance regulation activities, our database, and other information is available on our company website (in English and Japanese) to facilitate global information sharing by our subsidiaries in Japan and overseas.

### PRTR data for fiscal 2009 Figures in parentheses indicate fiscal 2008 data.



The above values are rounded to the first decimal place.

\*1 Includes recycling paid for by NEC Electronics.

### Activities to reduce VOC emissions

Until now, the NEC Electronics Group has treated organic gas emissions containing VOCs to detoxify emissions released into the atmosphere by our factories.

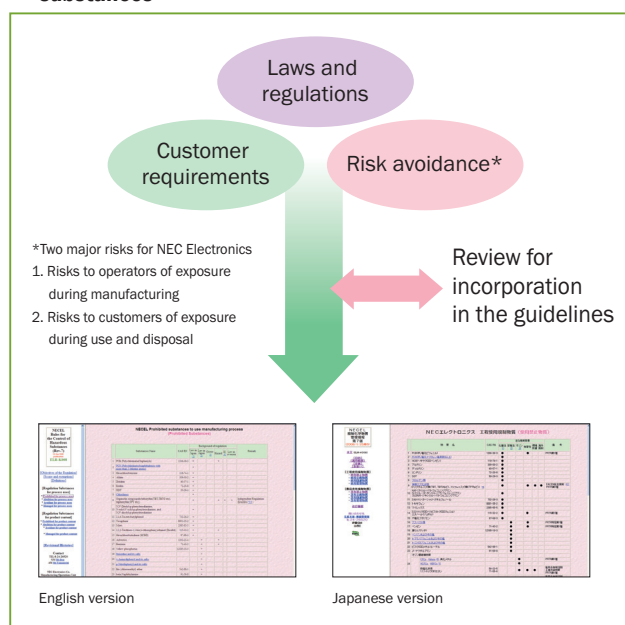
In addition to this measure, during fiscal 2009 we worked on optimizing gas usage conditions in the manufacturing process and increasing the efficiency of our manufactory equipments, and were successful in reducing the amount of VOCs we use by approximately 450 tons compared with the amount used in fiscal 2008. In the future, we will continue to actively work on reducing VOC emissions by implementing both emission-related and process-related measures.

## Management of Banned Chemical Substances

**We manage regulated chemical substances according to a set of voluntary guidelines that are more exacting than the requirements of relevant laws.**

In addition to responding to social trends reflected in relevant laws and regulations and the requirements of our customers, we perform voluntary toxicity tests on each chemical substance used and evaluate potential risks. The results are recorded in our Guidelines for the Handling of Chemical Substances, which are more exacting than those of relevant laws. Substances are graded and classified into four categories—banned, phased out, avoided, and controlled—and are strictly managed in accordance with the guidelines. In fiscal 2009, in compliance with regulations, we strengthened regulation of PFOS (perfluorooctane sulfonate) and other organic fluorine compounds, whose bioaccumulation potential is a cause for concern for the environment.

### Voluntary corporate guidelines for regulated chemical substances



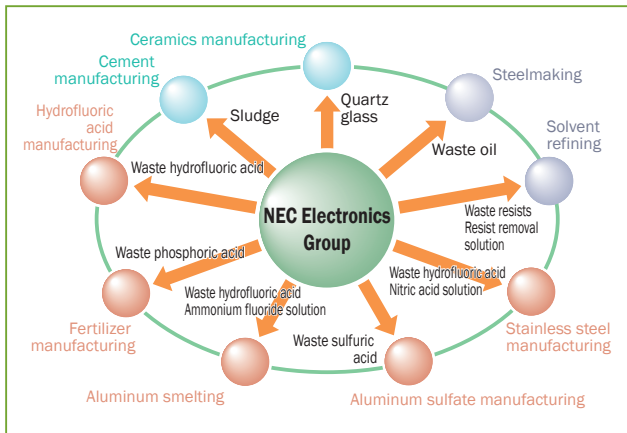
## Waste Reduction and Recycling

We maintain an industrial waste recycling rate of 99% or more.

NEC Electronics began working to reduce waste and promote resource recycling in 1985. The entire group (our predecessor NEC Electron Devices and its Japanese manufacturing subsidiaries) achieved an industrial waste recycling rate of 99% or more in September 2000, which the NEC Electronics Group has maintained since that time.

Our waste reduction and recycling efforts include developing manufacturing processes and designing factories that minimize generation of waste. Also, we are collaborating with companies in other industries to promote waste recycling.

### Joint Recycling Activities with Other Industries

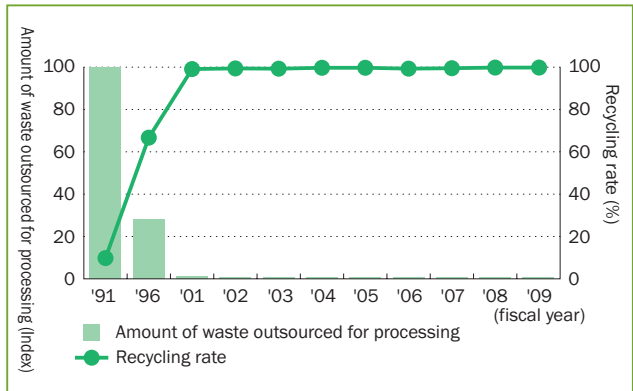


### Site check for an industrial waste management contractor

Before drawing up a consignment contract with an industrial waste management contractor, the NEC Electronics Group checks the permissions from the local government, processing conditions, and management conditions by going to the actual site. The items that are checked are the same throughout the group, and all results are shared.

Even after the contract is drawn up, we periodically check the site, and, if the site is determined not to meet our standards, we request corrections and sometimes stop business at the site to prevent problems from occurring.

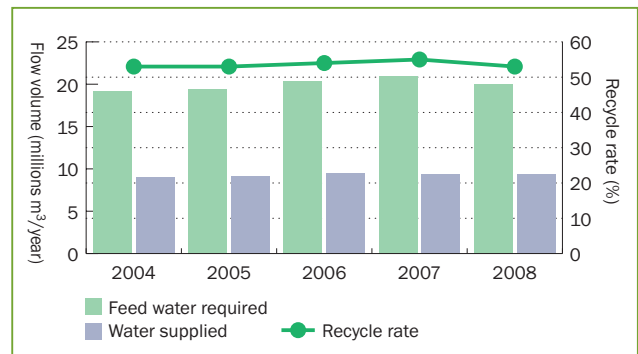
### Transition in industrial waste recycling



### Water resource conservation

The semiconductor industry consumes a considerable amount of water. The NEC Electronics Group is committed not only to conserving water, but also to recovering and reusing water discharged from our factories and offices. These efforts have enabled us to cut the feed water required for our semiconductor manufacturing processes that is supplied from outside sources by more than half.

### Reuse of water



\* Recycle rate equals (feed water required minus water supplied) divided by feed water required.

## Talking about ecology

### We are promoting the management and reduction of industrial waste.

I'm in charge of managing and reducing the industrial waste produced by our factories. In addition to performing monitoring and inspection, ensuring compliance with laws, and educating and training workers, a variety of other daily activities are necessary to promote recycling, reduce

the amount of generated industrial waste, and reduce the amount of CO<sub>2</sub> emitted during transportation. To help preserve our global environment, I hope to continue to improve these activities.



Toru Kainuma, NEC Semiconductors Yamagata

## Environmental Risk Management

**We established a set of safety standards and a system for sharing information to implement environmental risk management throughout the NEC Electronics Group.**

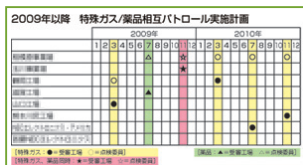
In addition to conventional regulations for handling and controlling special gases\*, NEC Electronics own regulations for controlling chemicals are implemented throughout the NEC Electronics Group in the effort to prevent industrial accidents. Also, reciprocal patrols are conducted by all of our manufacturing companies to reduce overall risk.

\* The term special gases used by NEC Electronics signifies the group of specific high pressure gases and semiconductor material gases specified by laws and regulations such as the High Pressure Gas Safety Law.

### Strategies for controlling special gases

In 1984, safety control standards for special gases were established that incorporate NEC's accumulated know-how and experience. The most recent edition of the standards (edition 9 as of 2008) is the result of repeated revision and updating of the standards with respect to amendments to the High Pressure Gas Safety Law, accidents that have occurred in the semiconductor industry, and lessons learned from near-miss incidents in our factories.

In addition, our manufacturing subsidiaries carry out patrols to check each other's handling of special gases and verify that all sites using special gases are implementing appropriate safety control measures in compliance with regulations. The system has proven very effective. No major chemical leaks or explosions have occurred since the patrols were established.



Yearly plan for performing reciprocal patrols



A reciprocal patrol

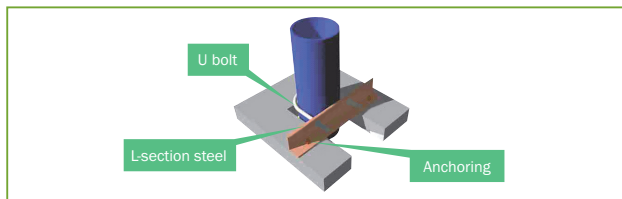
### Strategies for controlling chemicals

We are implementing stronger measures to prevent leakage and applying them to a greater number of chemicals. After a review of regulations, we decided that it is essential to furnish equipment using these chemicals with an automatic shutoff function. We have reinforced the safety of equipment where necessary and stepped up measures to prevent leakage for targeted equipment. In fiscal 2006, we began reciprocal patrols to check handling of chemicals in addition to handling of special gases.

### Strategies for responding to earthquakes

In fiscal 2006, we established a new set of regulations for all of our companies that specify standards for installing structural elements of factory buildings and related plant facilities, and positioning and anchoring manufacturing equipment based on expected seismic intensity (maximum seismic intensity of 6). In fiscal 2009, we continued to implement stronger measures to reinforce safety where necessary in compliance with these regulations.

## Vertical piping anchored with a reinforcing plate



### Information sharing

To help prevent accidents, we have compiled collections of industrial accidents and near-miss incidents that are made available on our website to facilitate information sharing. All manufacturing subsidiaries in the NEC Electronics Group use the information to develop risk management activities. The progress of these activities is checked during environmental management audits.

The website facilitates information sharing

### Environmental accident reports

Early in the morning on May 18<sup>th</sup>, an accident in which acidic drainage flowed into the sewer drain occurred at the NEC Semiconductors Kyushu Yamaguchi plant in Kawashiri, Kumamoto. During the manufacturing process, approximately 110 liters of sulfuric acid, which had a pH level that deviates from the standard sewage range of 5.0 to 9.0, flowed out, and, before the acid could be neutralized, it entered the sewer system. The acid had a pH level of 4.1 (the minimum value) and 9 m<sup>3</sup> flowed into the drain.

The plant reported the accident to Kumamoto city and took actions such as installing an emergency cutoff valve to prevent future accidents. The sewer system was not damaged as a result of this accident.

### Complaints from neighboring residents

In fiscal 2009, we received no complaints from neighboring residents in Japan or overseas.

### Violations of laws and regulations

In fiscal 2009, as in the past, we received no fines or penalties for violations of environmentally related laws and regulations.

# Eco-communication activities

As a semiconductor manufacturer, the NEC Electronics Group promotes eco-communication in order to build good relationships with all of our stakeholders.

## Communication Activities

**We make environmental information available to the public in the effort to promote global information disclosure.**

We publish an environmental report, disclose environmental information on our website, and participate in symposiums and exhibitions to facilitate global disclosure of information on our environmental efforts.

### Website information disclosure

We provide environmental information services on our website, which is one of the important tools we use for eco-communication. Our environmental policies, the content of our environmental efforts, and environmental reports are available to the public at the site.

“Environmental Activities” page in the NEC Electronics website

**URL** <http://www.necel.com/eco/en/>

### Publication of reports on websites

NEC Electronics Group companies also release environmental information on their websites.



Environmental reports available on the websites of group companies.

### NEC Semiconductors Yamagata

**URL** [http://www.syg.necel.com/eco/eco\\_report.html](http://www.syg.necel.com/eco/eco_report.html)

### NEC Semiconductors Kansai

**URL** <http://www.sks.necel.com/eco/report.html>

### NEC Semiconductors Kyushu Yamaguchi

**URL** <http://www.sky.necel.com/eco/report.html>

### Lecture at the International Semiconductor Environment, Safety, and Health Conference

The 15<sup>th</sup> International Semiconductor Environment, Safety, and Health Conference (ISESH) was held in Hokkaido in June of 2008. NEC Electronics gave a lecture on our activities to reduce PFC emissions.

During the lecture, we presented information about our three steps to reduce PFC emissions: introducing substitute gases, reducing the amount of gases used, and introducing abatement equipment.



ISESH lecture

### Factory tour for elementary students

In September of 2008, third year students from the neighboring elementary school visited NEC Semiconductors Kyushu Yamaguchi's Nishiki plant in Kumamoto for a tour. That day, students had a chance to see our semiconductor manufacturing process, how waste is handled at the Nishiki plant, and our activities to preserve groundwater. The children had plenty of excited questions about making semiconductors.



Students visiting for the tour



## Educational and Awareness-raising Activities

We use lectures and e-learning at our companies to raise awareness.

### Education and awareness-raising system

The NEC Electronics Group conducts a general education program for all employees and a job-specific specialized education program.

The general education program aims to raise environmental awareness and knowledge. The program consists of level-specific group classes, instruction for all employees conducted on an annual basis, and instructional material on the web that employees can access at their convenience. The specialized education program aims to raise environmental expertise. The program consists of individual instruction in job-specific content and instruction for persons involved in work related to environmental management.

### Education and awareness-raising system

#### Improvement of environmental awareness and knowledge

Level	Awareness-raising
<ul style="list-style-type: none"> <li>Instruction for new managers</li> <li>Instruction for new supervisors</li> <li>Instruction for new employees</li> </ul>	<ul style="list-style-type: none"> <li>Environmental management meeting</li> <li>Environmental activity award</li> <li>Environmental e-mail magazine</li> </ul>

#### Improvement of environmental expertise

Job-specific specialized instruction	Work related to environmental management
<ul style="list-style-type: none"> <li>Green procurement</li> <li>Environmental laws and regulations</li> <li>Environmental communication</li> </ul>	<ul style="list-style-type: none"> <li>Instruction for internal auditors</li> <li>Instruction for environmental leaders</li> </ul>

### Education for all employees

As part of our activities during Environment Month in June, we conducted e-learning environmental education. The theme of the education was global warming and our group's response, and employees of NEC Electronics and group companies in Japan learned about how global warming works, the effects of global warming in Japan, and what our group is doing to reduce CO<sub>2</sub> emissions.

### Environmental management conference

We held an environmental management conference at Tamagawa Renaissance City on June 16<sup>th</sup>, 2008. There, the head of Tokyo Electron's Environment, Health & Safety Center, Satoshi Saito, gave an address, and then awards were presented by the president to organizations and teams that conducted outstanding environmental activities.

Awards were presented for activities in all areas, including the development and design of green products, activities to save energy at factories, activities to prevent factory pollution, and eco communication activities. At the awards ceremony, the representatives who accepted the awards presented examples of their environmental activities, and the ceremony was simultaneously broadcast to 16 offices through our television conference system.



Address



Awards ceremony

## Talking about ecology

### Environmental volunteers and activities to restore the Awazu no Seiran Pine Tree Avenue

The road that runs in front of the main entrance and northern entrance of our Shiga plant has a special history: it is known as *Awazu no Seiran*, one of the *Omi Hakkei* (eight excellent views of Omi) in old Tokaido that once calmed the hearts of travelers. Now, there are only a few pine

trees left, so current and retired workers at my company are raising funds to try to restore the avenue. We also aim to cooperate with the locals in cleaning the river and replanting flowers.



Kimio Miyoshi, NEC Semiconductors Kansai



# Milestones in Environmental Activities

Year	Company milestones	World milestones
1960s	1965 ● Began development of ICs	
	1967	• Basic Law for Environmental Pollution Control promulgated
1970s	1970 ● Appointed a director in charge of environmental issues and established a pollution prevention management division	
	1971 ● Established environmental management guidelines	• Environmental Agency established
	1972	• The Club of Rome released the book Limits to Growth • The United Nations Conference on the Human Environment held
	1973 ● Began environmental auditing	
	1974	• Professor Frank S. Rowland's paper on ozone-layer depletion announced
	1983	• Results of national groundwater pollution survey released
1980s	1985 ● Began zero waste activities	
	1987	• Montreal Protocol on Substances That Deplete the Ozone Layer adopted
	1989 ● Eliminated use of organic chloride-based detergents (trichloroethylene, etc.)	• Use of trichloroethylene regulated by law
	1991	• Recycling Law enacted • Japan Federation of Economic Organizations releases Keidanren Global Environment Charter
1990s	1992 ● Established NEC Environment Charter	• Earth Summit held; Agenda 21 adopted
	1993	• Basic Environment Law established
	1994 ● Phased out specified chlorofluorocarbon gases (cleaners)*	
	1996 ● Phased out ethylene glycol-based solvents	• Official issuance of ISO 14001
	1997	• COP3 Kyoto Conference held
	1998 ● Established Semiconductor Environmental Management Center to manage environmental matters related to semiconductors and electronics components	• Electric Household Appliance Recycling Law established
	1999 ● Green purchasing declaration ● Eliminated use of hydrazine	• Law for PRTR (Pollutant Release and Transfer Registers) and Promotion of Chemical Management established
	2000	• Fundamental Law for Establishing a Sound Material-Cycle Society established • Law on Promoting Green Purchasing established
2000s	2002 ■ NEC Electronics Corporation established	• Soil Contamination Countermeasures Law established
	2003 ■ NEC Electronics Corporation listed on the Tokyo Stock Exchange ■ Eliminated use of tributyltin oxide	
	2004 ■ Acquired ISO 14001 certification for all semiconductor manufacturing sites in and outside Japan ■ Achieved 100% green procurement of direct materials	
	2005 ■ Acquired ISO 14001 certification for all consolidated subsidiaries in and outside Japan	• Kyoto Protocol takes effect
	2006 ■ Compliance with RoHS Directive completed	• European Union's RoHS Directive takes effect
	2007	• China's RoHS takes effect
	2008 ■ Participant in the United Nations Global Compact	

● Milestones related to the entire NEC Group

\* Specified chlorofluorocarbon, a refrigerant, is scheduled to be completely phased out by fiscal 2011.

# Corporate Profile

## Company Profile

<b>Company Name</b>	NEC Electronics Corporation
<b>Headquarters</b>	1753 Shimonumabe, Nakahara-ku, Kawasaki, Kanagawa 211-8668, Japan Phone: +81-44-435-5111 (front desk)
<b>Established</b>	November 1, 2002
<b>Capital Stock</b>	86 billion yen (as of March 31, 2009)
<b>Consolidated sales</b>	546.5 billion yen (for the year ended March 2009)
<b>Major operations</b>	Researching, developing, manufacturing, selling and servicing semiconductors, with a focus on system LSIs.
<b>Employees (consolidated basis)</b>	Approximately 22,476 (as of March 31, 2009)

## Business Results in Fiscal 2009 (Fiscal year ended March 2009)

Consolidated net sales for the fiscal year ended March 31, 2009 were ¥546.5 billion (\$5,520 million). We saw solid sales in some products, such as the EMMA series products for digital home appliances with an expansion in the customer base, and new business for embedded DRAM LSIs. This growth, however, was outweighed by lower sales of driver ICs for LCD panels, automotive semiconductors, and general-purpose products, including discrete semiconductors and microcontrollers.

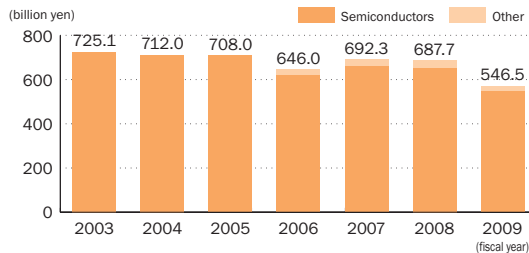
We posted a consolidated net loss of ¥82.6 billion (\$835 million) and loss before income taxes of ¥89.3 billion (\$893 million) for the fiscal year, primarily due to a loss provision related to pending legal issues, as well as expenses stemming from the closing of manufacturing and R&D lines in Japan.

In light of severe economic conditions, NEC Electronics intends to accelerate structural reforms for building a sound business foundation in the fiscal year ending March 31, 2010. We will speed up realignment of manufacturing structures, enhance R&D efficiency, and slash other expenses, which will include reductions in personnel expenses. By implementing these measures we will reduce fixed costs significantly, and aim to restore "EIGYO profit"\* for the fiscal year ending March 2010.

\* "EIGYO profit" is calculated as net sales less cost of sales, research and development expenses, and selling, general and administrative expenses, and is equivalent to operating profit under financial reporting practices generally accepted in Japan

\* For details, information refer to the *Annual Report*

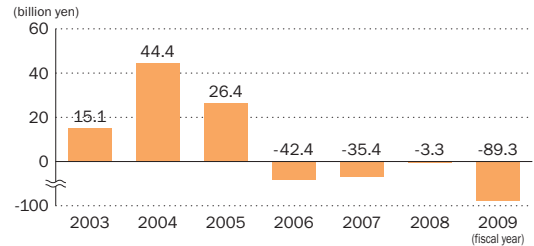
### Trends in consolidated net sales



## History

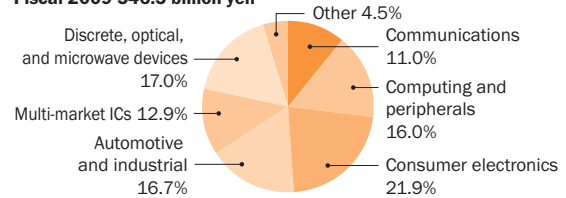
- 1899 Nippon Electric Company, Ltd. (now NEC Corporation) is established.
- 1960 NEC begins integrated circuit R&D.
- 1985 NEC captures the largest share of the global semiconductor market.
- 2002 NEC Electronics separates from parent company NEC Corporation and establishes itself as an independent semiconductor company.
- 2003 NEC Electronics makes its initial public offering on the Tokyo Stock Exchange (First Section).

### Trends in consolidated income (loss) before income taxes



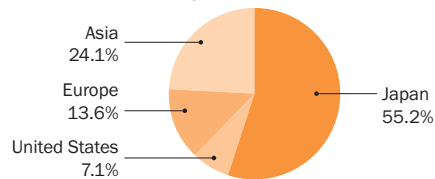
### Sales by application

Fiscal 2009 546.5 billion yen



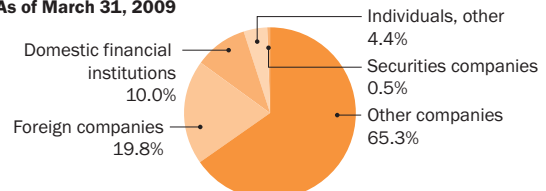
### Sales by geographical segment

Fiscal 2009 546.5 billion yen



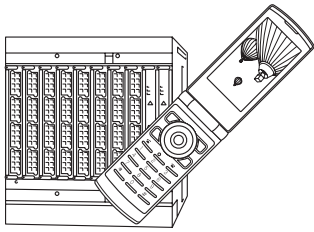
### Distribution of ownership among shareholders

As of March 31, 2009



## Business segments and main applications

### Communications



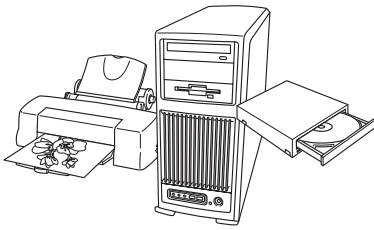
#### Main applications

- Mobile handsets
- Broadband networking equipment
  - Routers
  - Mobile phone base stations

#### Main products

- System LSI chips
- Driver ICs for small TFT-LCDs
- System memories

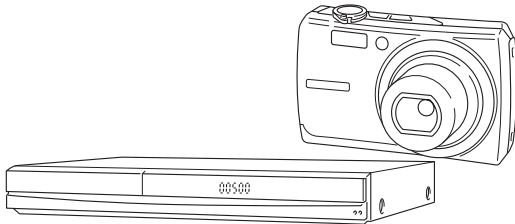
### Computing and Peripherals



- Computers
  - Servers
  - Workstations
- Computing peripherals
  - Rewritable DVD drives
  - Printers
  - LCDs for PCs

- System LSI chips
- Microcontrollers
- Driver ICs for large TFT-LCDs

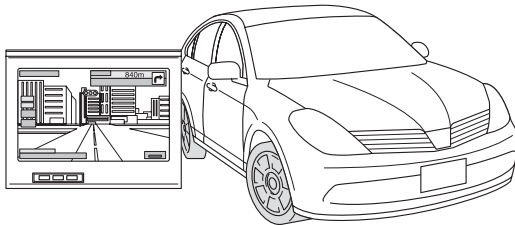
### Consumer Electronics



- Digital consumer electronics
  - Blu-ray players and recorders
  - Digital televisions
  - Digital cameras
- Home appliances
- Game consoles

- System LSI chips
- Microcontrollers

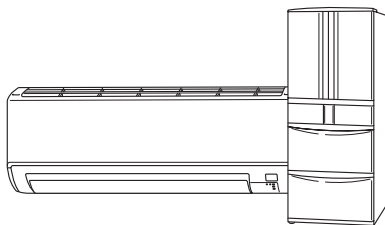
### Automotive and Industrial



- Automobiles
  - Engines
  - Body control
  - Airbags
  - Car audios
- Industrial
  - Factory automation

- Microcontrollers
- System LSI chips

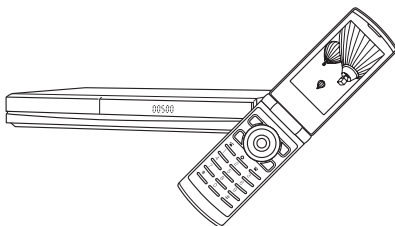
### Multi-market ICs



- Wide range of electronics equipment

- General-purpose microcontrollers
- Gate arrays
- General-purpose system memory

### Discrete, Optical, and Microwave Devices

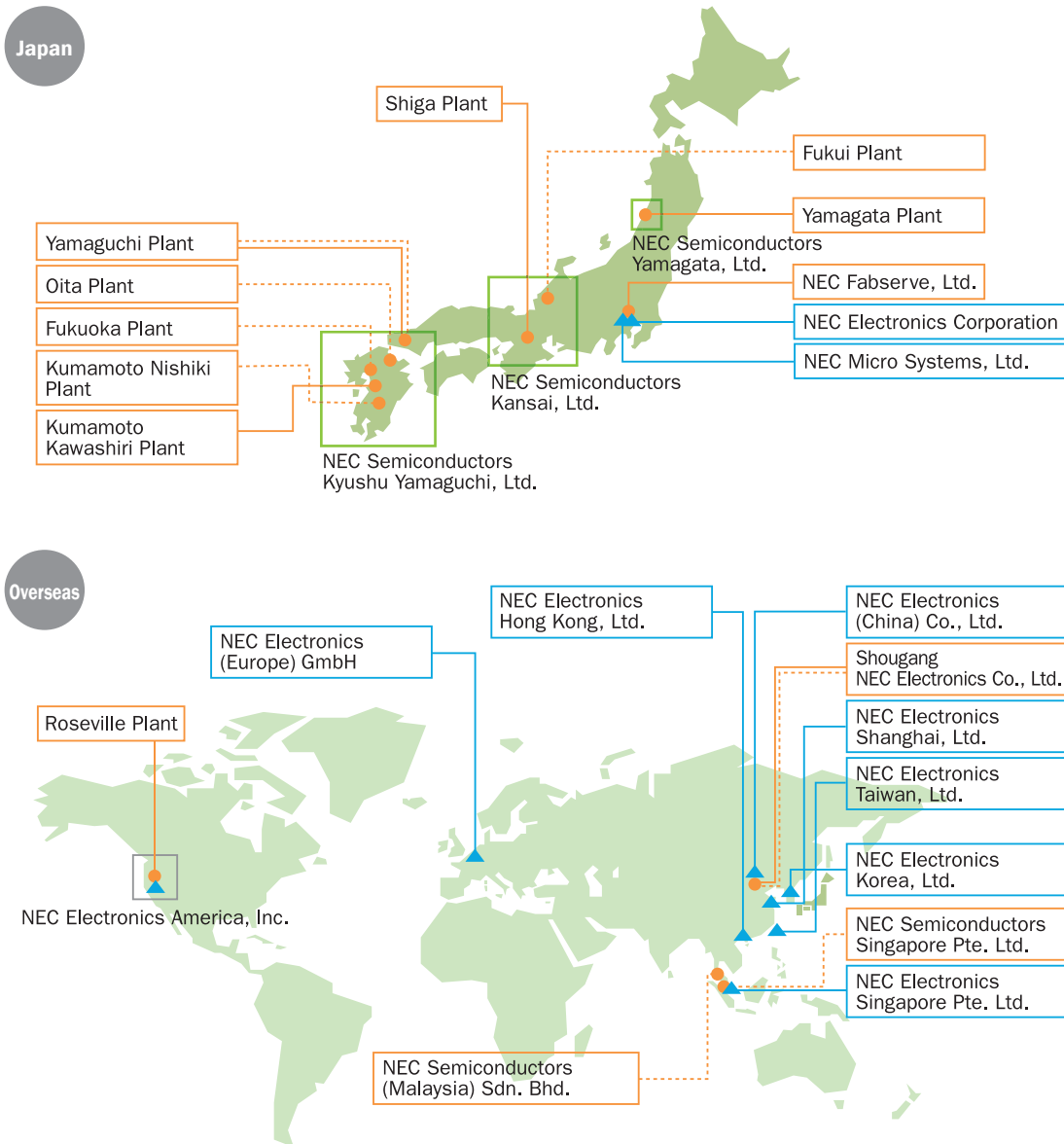


- Wide range of electronics equipment

- Diodes
- Transistors
- Optical semiconductors
- Microwave semiconductors

## Major Subsidiaries, Factories, and Affiliates (as of April 1, 2009)

● Manufacturing Companies and Plants ( — Front-end — Back-end) ▲ Sales & Design Companies



### Editor's postscript

Thank you for reading *CSR and Environment Report 2009*. This year's report begins with the special feature "Building a Green Society", which introduces some of the green-product activities we conduct to save energy and protect the environment. We hope the article gives readers a better understanding of our business.

We will continue to issue reports such as this one and disclose various other information that helps to earn the confidence and trust of everyone with a stake in our company. Please use the questionnaire form to ask us any questions you have about this report or to tell us your opinion of or ask questions about corporate social responsibility activities undertaken by the NEC Electronics Group.

### Direct inquiries to:

NEC Electronics Corporation  
 Corporate Communications Department  
 e-mail: [csr@necel.com](mailto:csr@necel.com)

# Glossary

## NEC Electronics CSR and Environment Report 2009

### ISO 9001

P.15

An international standard for quality management system requirements established by the International Organization for Standardization (ISO).

### ISO/TS 16949

P.15

The requirements for application of ISO 9001 by organizations within the automotive sector.

### DRBFM

P.16

Design Review Based on Failure Mode. An analytical design review method that applies multiple perspectives to discover and prevent design problems that may occur from changes and modifications to system specifications.

### Greenhouse gases

P.31

Gases such as carbon dioxide, methane, nitrous oxide, HFCs (hydrofluorocarbons, a substitute for CFCs), PFCs, and SF<sub>6</sub> (sulphur hexafluoride) that contribute to global warming.

### ISO 14001

P.31

A standard for environmental management systems established by the International Organization for Standardization (ISO).

### PFC

P.31

Perfluorocarbons. PFCs have a long atmospheric life and a global warming potential (GWP) index of several thousand. PFCs are used as cleaning gases in semiconductor manufacturing processes.

### GWP

P.32

Global warming potential. An index used to measure global warming, calculated as the ratio of the effect of the emission of 1 kilogram of a greenhouse gas to that of the emission of 1 kilogram of carbon dioxide.

### Green procurement

P.33

Priority procurement of products from companies that are selected on the basis of their active efforts to reduce environmental impact and protect the environment. NEC Electronics procures products from purchasing partners that meet standards we define.

### Environmental accounting

P.34

A tool for quantifying a company's investment in environmental activities, the cost of environmental impact reductions, and relevant economic effects.

### JQA

P.35

Japan Quality Assurance Organization. An organization that performs assessment and registration of company management systems for ISO 14001 certification.

### CEAR

P.36

Center of Environmental Auditors Registration. CEAR is a unit of the Japan Environmental Management Association for Industry. It is the only organization in Japan that assesses and registers ISO 14001 environmental management system auditors.

### JAB

P.36

The Japan Accreditation Board for Conformity Assessment. It is the only organization in Japan that accredits ISO certification organizations and organizations that evaluate and register auditors.

### The Administrative Measure on the Control of Pollution Caused by Electronic Information Products

P.38

Also known as the China RoHS, this is a Chinese government regulation to control the chemical substances included in electrical and electronic products sold in China. Products that contain less than the specified threshold level of six chemical substances (mercury, cadmium, lead, hexavalent chromium, polybrominated biphenyls, and polybrominated diphenyl ethers) have a "not included" label attached. Products containing chemicals that exceed the threshold level are labeled with the names of the included chemical substances and an environmentally friendly use period in years. This regulation came into effect on March the 1st, 2007.

### CVD

P.38

Chemical Vapor Deposition. A method of deposition by which a substance—the raw material used to form the film—is exposed to gas and placed on a silicon substrate, then heat or plasma is used to induce a chemical reaction with the gas on the substrate surface to form the film.

### ELV Directive

P.38

End of Life Vehicles Directive. This is a European Union directive restricting the use of lead, mercury, cadmium, and hexavalent chromium in vehicles.

### LCA

P.38

Life-Cycle Assessment. A method for quantitatively and objectively evaluating the environmental impact of product materials through all stages of the product life cycle of raw material extraction, manufacturing, distribution, use, and disposal.

### REACH regulation

P.38

REACH stands for Registration, Evaluation, Authorisation, and Restriction of Chemicals. The REACH regulation mandates the registration and evaluation of chemical substances manufactured in or imported to the European Union. The regulation also requires the use of substances of very high concern to be authorized, and prohibits the use of extremely hazardous substances.

### RoHS

P.38

Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment. A European Union directive to restrict the use of certain hazardous substances such as lead, mercury, cadmium, hexavalent chromium compounds, and polybrominated flame retardants (PBB, PBDE) in electrical and electronic equipment. RoHS was enacted on July 1, 2006.

### PRTR

P.42

Pollutant Release and Transfer Registers. Japan enacted the Law for PRTR (Pollutant Release and Transfer Register) and Promotion of Chemical Management in 1999 to cooperate in the global effort by government organizations to develop systems to compile and publicly release information submitted by companies on the quantity of toxic chemical substances they release into the environment and transfer in products and waste.

### COP3

P.47

The Third Session of the Conference of the Parties to the United Nations Framework Convention on Climate Change, whose purpose is to prevent global warming. COP3 was held in Kyoto in December 1997. The third conference adopted the Kyoto Protocol, which prescribes targets for reduction of greenhouse gas emissions for each country.



# NEC Electronics CSR and Environment Report 2009 Questionnaire

## Facsimile +81-44-435-1669

NEC Electronics Corporate Communications Department

Please let us know your opinions and comments.  
 This questionnaire is also available on <http://www.necel.com/csr/en/>

**Q1. In what capacity did you read this report?**

- |   |   |  |
|---|---|--|
| <input type="checkbox"/> Customer   | <input type="checkbox"/> Company or organization  | <input type="checkbox"/> Financial institution                           |
| <input type="checkbox"/> Shareholder/Investor   | <input type="checkbox"/> CSR-related work         | <input type="checkbox"/> Rating or survey organization                   |
| <input type="checkbox"/> Purchasing partner   | <input type="checkbox"/> Environment-related work | <input type="checkbox"/> Research or educational organization            |
| <input type="checkbox"/> Sales partner  | <input type="checkbox"/> Other                    | <input type="checkbox"/> Student   |
| <input type="checkbox"/> Citizen in a community where an NEC Electronics Group company is located | <input type="checkbox"/> NGO or NPO               | <input type="checkbox"/> Media organization                              |
| <input type="checkbox"/> Government or administrative organization                                | <input type="checkbox"/> Environmentally related  | <input type="checkbox"/> NEC Electronics Group employee or family member |
|   | <input type="checkbox"/> Other                    | <input type="checkbox"/> Other ( )                                       |

**Q2. How did you learn of this report?**

- |   |   |  |
|---|---|--|
| <input type="checkbox"/> NEC Electronics' website | <input type="checkbox"/> Information from NEC Electronics | <input type="checkbox"/> Trade show or seminar |
| <input type="checkbox"/> Annual Report            | <input type="checkbox"/> Newspaper or magazine            | <input type="checkbox"/> Other ( )             |

**Q3. What is your overall impression of the report?**

- | Intelligibility                                | Adequacy of content                       | Amount of information            | Design                           |
|--|---|----------------------------------|----------------------------------|
| <input type="checkbox"/> Very intelligible     | <input type="checkbox"/> Very substantial | <input type="checkbox"/> Large   | <input type="checkbox"/> Good    |
| <input type="checkbox"/> Intelligible          | <input type="checkbox"/> Satisfactory     | <input type="checkbox"/> Average | <input type="checkbox"/> Average |
| <input type="checkbox"/> Not very intelligible | <input type="checkbox"/> Not sufficient   | <input type="checkbox"/> Low     | <input type="checkbox"/> Poor    |

**Q4. What parts of the report did you think were particularly admirable? (multiple answers allowed)**

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Top Commitment<br><input type="checkbox"/> Special Feature: Building a Green Society<br><br><b>Management</b><br><input type="checkbox"/> NEC Electronics Group CSR Management System<br><br><b>Social Responsibility</b><br><input type="checkbox"/> Policies and Activities for Improving Customer Satisfaction<br><input type="checkbox"/> Quality Improvement Strategies<br><input type="checkbox"/> Quality Improvement and Product Safety | <input type="checkbox"/> Approach to Transparent Management<br><input type="checkbox"/> Working Together with Purchasing Partners<br><input type="checkbox"/> Working Together with Sales Partners<br><input type="checkbox"/> Community Improvement<br><input type="checkbox"/> Respect for Human Rights and Equal Opportunity Practices<br><input type="checkbox"/> Human Resource Development and Communication<br><input type="checkbox"/> Occupational Health and Safety | <b>Efforts to preserve the global environment</b><br><input type="checkbox"/> Environmental Management System<br><input type="checkbox"/> Green-product activities<br><input type="checkbox"/> Eco-factory activities<br><input type="checkbox"/> Eco-communication activities<br><input type="checkbox"/> Milestones in Environmental Activities<br><br><input type="checkbox"/> Corporate Profile |
|--|---|---|

**Q5. What impression in regard to NEC Electronics Group CSR activities did you receive from reading this report?**

- Highly commendable     
  Commendable     
  Not commendable     
  Not sure

**Q6. Please let us know your opinions and comments in regard to this report, and any expectations or suggestions for improvement that you have in regard to our CSR activities.**

**Thank you for your cooperation. Please fill in the personal information below to the extent you are comfortable with.**

The personal information you supply us on this questionnaire form will be used only for the purposes below.

- To reply to any requests you may have.
- To improve our CSR activities and CSR and Environment Report.

Name	e-mail
------	--------



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